

SCS ENGINEERS

Work Plan for Additional Subsurface Investigation

**John Riddell
4660 Hessel Road
Sebastopol, California
(Assessor's Parcel No. 062-112-005)**

File Number 01203317.00

Prepared by:

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To:

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October 26, 2005


LIMITATIONS/DISCLAIMER

This work plan has been prepared specifically for Mr. John Riddell to address the need for additional subsurface investigation at and around 4660 Hessel Road, Sebastopol, California. This work plan has been prepared in accordance with the care and skill generally exercised by reputable professionals, under similar circumstances, in this or similar localities. No other warranty, expressed or implied, is made as to the professional opinions presented herein. Third parties use this report at their own risk.

Access to the property and the surrounding area is limited by buildings, roadways, underground and above-ground utilities, and other miscellaneous site features. Therefore, the proposed field exploration and points of subsurface observation are somewhat restricted.


Changes in site use and conditions may occur due to manmade changes or variations in rainfall, temperature, water usage, or other factors. Additional information which was not available to the consultant at the time this report was prepared or changes which may occur on the site or in the surrounding area may result in modification to the site that would impact this work plan and the scope of work proposed. This work plan is not a legal opinion.

We trust this report provides the information you require at this time and we appreciate the opportunity to work with you on this project. If you require any additional information, or have any questions, please do not hesitate to contact SCS at (707) 546-9461.


Kevin L. Coker REA 7887
CA registration fees paid through 06/30/06

11/1/05
Date




Stephen Knuttel PG 7674
CA registration fees paid through 07/31/07

1. NOV., 2005
Date

Introduction

SCS Engineers (SCS) is pleased to present this work plan for additional subsurface investigation for 4660 Hessel Road, Sebastopol, California. This work plan has been prepared pursuant to a regulatory directive from the North Coast Regional Water Quality Control Board (NCRWQCB, 2005a). The site is located as shown on the Site Location Map, Figure 1 (Assessor's Parcel No. 062-112-005). General site features are as shown on the Site Plan, Figure 2.

Background

The 4660 Hessel Road site, located on the northwest corner of the intersection of Hessel Road and Turner Road, is currently occupied by a residence as shown on Figure 2. From the 1930s until the mid-1970s, the site was operated as a general store and gasoline fueling station with underground storage tanks (USTs) and dispensers (GeoPacific, 1996). An environmental investigation was initiated in 1991 after hydrocarbon impacted soil was discovered by Pacific Gas and Electric Company (PG&E) during an excavation along Hessel Road for the installation of natural gas pipeline hookups (GeoPacific, 1996).

A ground penetrating radar survey (GPR) was conducted at the site in November 1994 in an effort to locate potential sources of the soil impact identified by PG&E in June 1991 (GeoPacific, 1996). The GPR survey identified two known USTs near the porch of the residence at 4660 Hessel Road located as shown on Figure 2. The UST identified as UST-A was discovered west of the porch and was estimated to be approximately 290 gallons in capacity; UST-B was discovered near the eastern portion of the porch and was estimated to be approximately 575-gallons in capacity. Based on product samples collected from the USTs, GeoPacific indicated that the USTs most likely held leaded gasoline. A third UST, believed to be under the porch of the residence, could not be located. The two accessible USTs were removed from the site in January 1995 (GeoPacific, 1996).

Twenty five soil borings (B-1 through B-25) were drilled and sampled at the approximate locations shown on Figure 2 in 1996 (GeoPacific, 1996). The borings were drilled to depths ranging from 4.5 to 6.5 feet below existing ground surface (bgs). Total petroleum hydrocarbons (TPH) as gasoline (g) were detected at concentrations up to 7,300 milligrams per kilogram (mg/kg) in soil samples collected near the former USTs. Benzene, toluene, ethylbenzene and xylenes (BTEX) were detected at concentrations up to 25 mg/kg benzene, 22 mg/kg toluene, 86 mg/kg ethylbenzene, and 430 mg/kg xylenes near the former USTs (GeoPacific, 1996). Soil and groundwater analytical results are presented in Tables 1 and 2.

Nine additional soil borings (B-101 through B-109) were drilled and sampled at the approximate locations shown on Figure 2 in February 1997 (PNEG¹, 1997). The borings were generally located between the former UST locations and a domestic well (DW-4) which had previously indicated a groundwater impact, and were drilled to depths ranging from 21 to 35 feet bgs. TPH-g was detected at concentrations ranging from 74 mg/kg (B-103-13') to 920 mg/kg (B-103-9');

¹ Pacific Northwest EnviroNet Group, Inc. (PNEG) became a part of SCS in July 2003.

BTEX constituents were detected at concentrations ranging from below the laboratory reporting limit to 250 mg/kg xylenes (B-101-9.5'). Target analytes were not detected above the laboratory report detection limits (RDL) in the soil samples collected from B-104 through B-109. Soil analytical results are presented in Table 3.

Fourteen pot holes were hand dug down to the gas pipeline in the trench which passed through the zone of shallow soil impact in November 1998 (PNEG, 1999a). The shallow soil sampling locations are as shown on Figure 3. The pipeline, located along Hessel Road, was thought to be providing a preferential pathway for hydrocarbon migration. The results of this investigation indicated that the trench around the gas pipeline was not providing a lateral preferential pathway for migration (PNEG, 1999a; Tables 4A and 4B).

Six groundwater monitoring wells (MW-1 through MW-6) were drilled, sampled, and installed, and five additional borings (B-110 through B-114) were drilled and sampled at the approximate locations shown on Figures 4 and 7, respectively, in June and July 1999 (PNEG, 1999b). The monitoring wells were drilled in pairs, with a shallow and a deep well comprising each pair. The three deep wells were MW-1, MW-3, and MW-5, and the three shallow wells were MW-2, MW-4, and MW-6. The shallow wells were installed and screened from 4 to 14 feet bgs, while the three deeper wells were installed and screened to intersect water beneath a shallow clay layer, which is present between 12 and 17 feet bgs on the eastern side of the study area. The shallow clay layer was not found at the MW-1 location so the well was subsequently screened at the same approximate depth as MW-3 and MW-5. TPH-g was not detected in any of the soil samples collected from the monitoring well borings. TPH-d was detected at a concentration of 2.1 mg/kg in MW-3-10' and was ND in all other samples collected during this investigation. TPH-mo was detected at a concentration of 5.0 mg/kg in MW-5-15' and was ND in all other samples. All soil samples collected for analysis were ND for MTBE (Table 5).

TPH-g was detected in the soil samples collected from the borings at concentrations ranging from 3.0 mg/kg in B-114-15' to 1,700 mg/kg in B-114-10' and B-114-13'. TPH-d was detected at concentrations ranging from 1.2 mg/kg in B-114-15' to 2,200 mg/kg in B-114-5' and B-114-13'. TPH-mo was detected in only one of the samples (B-114-13') at a concentration of 100 mg/kg. BTEX constituents were detected at concentrations ranging from 0.0082 mg/kg in B-110-10' to 87 mg/kg xylenes in B-114-10'. Soil analytical results are summarized in Table 6.

Ten additional monitoring wells (MW-7 through MW-16), consisting of five pairs of shallow-screened and deep-screened wells, were installed in October and November 2000 at the approximate locations shown on Figure 7 (PNEG, 2000e). TPH-g was detected in the soil samples collected from MW-16 at depths of 10 and 15.5 feet at concentrations of 3.5 mg/kg and 5.2 mg/kg, respectively. TPH-d was detected at concentrations of 3.7 mg/kg, and 2.7 mg/kg in MW-10-14', and MW-16-15.5', respectively. All soil samples were ND for MTBE (Table 5).

An indoor air quality survey was conducted by BioMax in the Giuliani residence on the adjacent property to the north of the subject site, located at 4620 Hessel Road. The results of the indoor air survey indicated that there was no threat to the Giuliani residents at 4620 Hessel Road from petroleum hydrocarbons in the vapor phase (PNEG, 2001c).

Twenty six additional borings (B-201 through B-226) were drilled and sampled at the approximate locations shown on Figure 5 in August 2001 (PNEG, 2002b). TPH-g was detected at concentrations ranging from 1.1 mg/kg (B-204-4' and B-216-6') to 1,300 mg/kg (B-221-9'); TPH-d at concentrations ranging from 27 mg/kg (B-211-8') to 1,400 mg/kg (B-216-11.5'); and BTEX constituents at concentrations ranging from 0.011 mg/kg benzene in B-210-8' to 140 mg/kg xylenes in B-210-4' and B-217-6'. All samples were ND for MTBE (Table 7).

In October 2001, approximately 1,800 cubic yards of soil was excavated from the site (PNEG, 2002b). The excavated soil was disposed at Forward Landfill in Manteca, California. Sidewall and bottom soil samples were collected under the direction of Ms. Beth Lamb of the NCRWQCB at the approximate locations shown on Figure 6. Impacted soil beneath the house at 4640 Hessel Road was deemed to have been inaccessible without demolition of the house. The preferential pathway which was identified during the excavation activities is likely the cause of the soil and groundwater impact to the north. Analytical results from the site excavation activities are summarized in Table 8.

Subsequent to the site remediation, four additional monitoring wells were drilled and installed, two of which were shallow (MW-18 and MW-20), and two of which were deep (MW-17D and MW-19D), at the approximate locations shown on Figure 7 in February, 2004 (SCS, 2004b). TPH-g was detected in the samples collected from MW-20 at depths of 5 feet and 10 feet at concentrations of 550 mg/kg and 52 mg/kg, respectively, and was ND in the samples collected from MW-18. BTEX constituents were detected in the samples collected from MW-20 at depths of 5 feet and 10 feet at maximum concentrations of 14.6 mg/kg xylenes and 2.18 mg/kg xylenes, respectively, and xylenes were detected at a concentration of 0.0035 mg/kg in the MW-18-10' sample. The five ether-based oxygenates were ND in all samples collected for analysis from MW-18 and MW-20. The additional VOCs were ND in the MW-18 samples, and were detected at concentrations ranging from 0.14 mg/kg n-butylbenzene in the MW-20-10' sample to 9.5 mg/kg 1,2,4-trimethylbenzene in the MW-20-10' sample. Soil analytical results are summarized in Table 9.

A shallow stand pipe was installed on the east bank of the creek at the site in order to evaluate the surface water-groundwater interaction in the site vicinity (SCS, 2004b).

Eight deep borings (B-115 through B-122) were drilled and sampled at the approximate locations shown on Figure 7 between the dates of January 24 and February 9, 2005. TPH-g was detected in the B-119@20.5', B-120@16.0', and B-122@10.5' samples at concentrations of 1.0 mg/kg, 12 mg/kg, and 1,700 mg/kg, respectively. BTEX constituents were detected at concentrations ranging from 0.0018 mg/kg ethylbenzene in B-122@31.0' to 109 mg/kg xylenes in B-122@10.5'. The lead scavenger, ethylenedichloride (EDC) was detected at concentrations of 0.003 mg/kg, 0.0096 mg/kg, 0.002 mg/kg, and 0.0052 mg/kg in the B-115@13.0', B-116@25.5', B-119@20.5', and B-122@16.0' samples, respectively. Additional gasoline-related VOCs were detected at concentrations ranging from 0.0073 mg/kg n-butylbenzene in B-122@16.0' to 62 mg/kg 1,2,4-trimethylbenzene in B-122@10.5'. The five ether-based oxygenates (MTBE, DIPE,

ETBE, TAME, and TBA) were not detected above the laboratory RDL in any of the samples. Soil analytical results are presented in Table 11.

TPH-g was detected in at least one groundwater sample collected from each of the borings at concentrations ranging from 100 micrograms per liter ($\mu\text{g/L}$) in B-120-W@5.0' to 58,000 $\mu\text{g/L}$ in B-122-W@10.0'. BTEX constituents were detected in at least one groundwater sample collected from each of the borings at concentrations ranging from 1.2 $\mu\text{g/L}$ toluene in B-119-W@3.0' to 20,000 $\mu\text{g/L}$ toluene in B-122-W@10.0'. EDC was detected in at least one groundwater sample collected from each of the borings at concentrations ranging from 2.4 $\mu\text{g/L}$ in B-121-W@15.0' to 63 $\mu\text{g/L}$ in B-115-W@21.5'. The additional gasoline-related VOCs were detected at concentrations ranging from 1.0 $\mu\text{g/L}$ naphthalene in B-120-W@5.0' to 3,000 $\mu\text{g/L}$ 1,2,4-trimethylbenzene in B-122-W@10.0'. Groundwater analytical results are presented in Table 12.

Site Conceptual Model

Site Geology and Hydrology

The lithology in the vicinity of the site consists of a layer of silty sand to poorly graded sand with interlayered sandy silt zones from the surface to depths varying between approximately 15 feet bgs in the southern areas of the site to approximately 25 feet bgs in the northern areas of the site (Figures 8 and 9). Gravelly layers have also been identified in this zone, primarily to the east along the creek. Below the silty sand and sand layer is a lower permeable clay/silt layer which is present in the area of the former UST at a depth of approximately 15 feet bgs and thickness of only several feet. This layer extends to the northern area of the site to maximum depth of 21 feet bgs and thickens to 10 to 15 feet. At locations in the northern area of the site this layer is identified as a highly organic silt/clay unit which is somewhat peat-like in nature. Below this lower permeable clay/silt layer are discontinuous layers of poorly graded sand, silty sand, sandy clay, clayey gravel, and silt to the maximum depth explored of 40 feet bgs.

The borings drilled in June and July of 1999 indicated a clay layer present in the eastern portion of the study area from approximately 12 to 17 feet bgs. This clay layer was detected in MW-3, MW-4, MW-5, and MW-6. The clay layer was not encountered in MW-1 or MW-2 in the western portion of the study area. Recently drilled wells and deep borings continue to indicate a surficial alluvial to fluvial environment in the site vicinity. The lithology consists of recently deposited sands, silts, and gravels to varying depths beneath the site. A lower permeable clay/silt layer has been identified which appears to gently slope downward towards the north (Figures 8 and 9). This lower permeable clay/silt layer and associated subsurface material throughout the area is part of the Wilson Grove Formation, which was deposited in an inland sea several million years ago. It is possible that this site was in a near shore environment and that terrace deposits are present, thus explaining the distinct changes in lithology over very short distances. It is also evident that, regardless of the mechanism of deposition, the more permeable zones are generally connected and appear to slope gently towards the stream channel along the top of an aquitard (Figures 8 and 9).

Based on analytical results, the bulk of the identified groundwater impact occurs in the shallow groundwater present in the high permeability, predominantly sand layer which is present in all holes drilled to date from the surface to a minimum depth of 20 to 25 feet bgs. The groundwater impact detected in deep borings B-117 and B-120 during the most recent drilling program at depths of 40 feet and 39 feet bgs, respectively, is most likely the result of trickle down affects caused by retracting the Hydropunch® tool in an attempt to obtain water samples from the boreholes. Water samples from both these holes were slow yielding and the sampler had to be pulled back to the maximum extent before a water sample could be collected, therefore, the samples may not represent an actual impact to the deeper water-bearing zone. A deeper impact indicated by the presence of petroleum related hydrocarbons in some of the domestic well to the north and east of the site may be the result of the northerly plunging lower permeable clay/silt and the thicker sand and gravel layers associated with the alluvial or fluvial deposits.

As indicated on Figures 8 and 9, MW-17D and MW-19D appear to have been installed in the second, deeper water-bearing zone at the site and are generally up-gradient from the plume (Figures 10A and 10B). As illustrated on Figure 8, the groundwater impact appears to be migrating along a preferential pathway which is generally sloping downwards towards the stream channel along the top of an aquitard. The relatively high concentrations of petroleum hydrocarbons in MW-15D (Figures 11A through 12B) appear to be the result of excess surface water infiltrating the subsurface in the vicinity of the septic leach field and forcing the hydrocarbons down until they reach the aquitard which slopes towards the stream channel. This appears to be the most likely cause of the elevated impact which has been detected in MW-15D when compared to MW-16. Additionally, MW-3 appears to have been, at least partially, installed in the lower water-bearing zone which explains why MW-3 has been generally ND in comparison to MW-15D. Another preferential pathway (higher permeability unit) appears to be present along the western side of the site and along the back side of the Giuliani residence (adjacent property to the north). This higher permeability unit is most likely the cause of the impact detected in the deep boring B-122 (Figure 7) and is likely contributing to the impact detected between MW-11 and MW-15D/MW-16 (Figures 11A through 13B).

Work Plan for Additional Subsurface Investigation

Proposed Deep Monitoring Wells

SCS proposes to drill, sample, and install three deep monitoring wells to provide vertical plume assessment and groundwater monitoring at the approximate locations shown on Figure 7. The deep wells will be drilled to an approximate maximum depth of 40 feet bgs, depending on field conditions encountered. The holes will be drilled using 8-inch diameter hollow stem augers and will be converted into monitoring wells using 2-inch diameter Schedule 40 flush threaded PVC material. The screened interval in the monitoring wells will consist of 0.010-inch machine slotted screen and will extend from approximately 30 to 40 feet bgs, depending on field conditions encountered. The anticipated maximum depth of each boring is approximately 40 feet, with 10 feet of screen in each well. A # 2/12 sand or its equivalent will be used to create a filter pack around the screen. The filter pack will be brought to approximately one foot above

the top of the screen. An approximately one foot bentonite seal will be placed on top of the sand filter pack, and the wells will be completed to the surface with a cement seal. Typical well completion details are presented on Figure W.

The well casing in each monitoring well will extend to within six inches bgs and will be fitted with a waterproof locking cap. The wells will be protected by traffic rated water-tight circular vaults set in traffic rated concrete and finished approximately 1/2-inch above grade.

Soil samples will be collected and examined for lithology from each of the borings beginning at an approximate depth 5 feet bgs, and every 5 feet thereafter to a maximum depth of approximately 40 feet bgs, or as determined by the on site field geologist. SCS does not anticipate submitting any soil samples for analysis as the proposed wells are outside of the documented areas of soil impact at the Site.

The drilling and sampling equipment will be pressure washed, and detergent washed and rinsed, to prevent cross contamination between borings. The drill cuttings will be placed in steel 55-gallon UN/DOT-approved drums, pending disposal. The water generated by decontamination, well development, and sampling will be stored at the site in steel 55-gallon UN/DOT-approved drums, pending disposal. Options for the disposal of the soil and groundwater will be evaluated once the soil and groundwater analytical results have been reported. Disposal options may include additional sampling of both soil and groundwater prior to acceptance for disposal.

Well Development, Sampling, and Reporting

The monitoring wells will be developed approximately 2 days after construction. The wells will be developed using a surge block and a submersible, groundwater purging pump. The wells will be pumped then surged for approximately 35 to 40 strokes to set the filter pack, followed by pumping of the wells until either they go dry or the drilling process water is deemed to have been removed (approximately five wetted well casing volumes). If a well goes dry during pumping but before the calculated amount of water has been extracted, this will be deemed adequate to have removed all the drilling process water.

After development, the wells will be allowed to stabilize for at least one day prior to measuring groundwater levels. The wells will be opened and the groundwater levels will be measured. The wells will be allowed to remain open for 5 to 10 minutes after which the water levels will be measured again. This process will continue until stable readings are obtained in the wells (± 0.02 feet in each well). After the wells have stabilized and water level measurements have been made, the wells will be pumped or bailed until approximately 3 to 5 wetted well casing volumes, or at least 5 gallons of groundwater have been removed, whichever is greater, or until the well goes dry, and until successive measurements of pH, temperature, conductivity, turbidity, and dissolved solids/oxygen have generally stabilized ($\pm 10\%$ of the prior reading). Measurements will be taken at regular intervals during purging. After purging is completed, the wells will be sampled in the order purged. This sequence will allow for maximum recovery, anticipated to be at least 80% of their original well volume. In high permeability areas, recovery typically

approaches 100%. If a well remains dry after purging, it will be allowed to remain open for at least one hour after which an attempt will be made to sample the well. If the well is still dry, an attempt will be made to sample the well on the next day. If the well still has not recovered, the well will be sampled during the next visit to the site by the field technician. This may not occur until the next quarterly monitoring event.

Pre-purge samples will be collected from any well which previously purged dry and did not recover within one hour for sampling. If the well can be purged and sampled during the next scheduled sampling event, the pre-purge sample will be discarded; otherwise, the pre-purge sample will be submitted for analysis. Groundwater samples will then be obtained for laboratory chemical analysis, using a separate disposable bailer for each well, and transferred to the appropriate containers supplied by the laboratory. The water generated by development and sampling will be stored at the site in 55-gallon UN/DOT-approved drums, pending disposal.

The newly installed monitoring wells will be sampled initially and the results presented in a report of investigation. The wells will then be included with the quarterly monitoring program which is in progress at the site. Analytical results will be evaluated after each sampling event to consider the need for additional investigation. A copy of SCS' Standard Soil and Water Sampling Procedures and QA/QC Protocol is attached.

Well Survey

The top of each new monitoring well casing will be surveyed under the supervision of a California licensed surveyor or a licensed civil engineer with surveying experience to 0.01 feet to determine its elevation relative to mean sea level. In addition, the latitude and longitude of each monitoring well will be determined to within 1 meter. The surveyed monitoring well elevations and monitoring well locations will be submitted electronically to the State Department of Water Resources Geotracker database.

Laboratory Analysis

Soil and groundwater samples collected from the monitoring well borings will be analyzed for TPH-g using EPA Method 8015M, and for volatile organic compounds (VOCs) by EPA Method 8260B full scan.

Proposed Stand Pipe Installation

SCS also proposes to hand auger and install three additional stand pipes along the edges of the stream at the approximate locations shown on Figure 7. One of the proposed stand pipes will be installed directly across the stream from the existing stand pipe; the other two will be installed on each side of the stream to the south/southwest of the existing stand pipe (Figure 7). The stand pipes will be installed to assist in SCS' evaluation of the surface water-groundwater interaction

at the Site as requested by the NCRWQCB (NCRWQCB, 2005a). The augering will be halted shortly after free groundwater is encountered, at which time the stand pipes will be installed. The stand pipes will consist of 2-inch diameter Schedule 40 PVC, 0.020 inch machine slotted screen and 2-inch diameter Schedule 40 blank PVC. The screened interval will extend from approximately 2 to 3 feet bgs and the blank interval will extend up to 1 foot above the ground surface. The bottom of each of the stand pipes will be capped and the top of each of the stand pipes will be covered with a locking cap. Once the holes are augered and the stand pipes inserted, any annular space will be backfilled with either #2/12 or #3 sand. A layer of filter fabric will be placed over the sand and then covered with the same surface material removed during augering. The elevations of the stand pipes will be surveyed to mean sea level using a laser level and the locations will also be surveyed using GPS instrumentation.

Samples from the stand pipes will be collected during each quarterly monitoring event. In addition, water samples will be collected from the stream up-gradient of the source area(s) impact and at the bridge, which is down-gradient of the source of area(s). The water samples will be collected following SCS' Standard Soil and Water Sampling and QA/QC Protocol and submitted to a California Department of Health Services certified laboratory for analysis.

Project Update

The preparation of a Corrective Action Plan/Feasibility Study has been recommended for the Site (SCS, 2005b). The NCRWQCB subsequently issued a letter concurring with the preparation of a FS/CAP (NCRWQCB, 2005a), and additionally requesting further on and off site characterization, revising the Site monitoring program, and a complete surface water groundwater interaction report. SCS has initiated the preparation of a FS/CAP which will be submitted upon completion. The named report will address the additional information which has been recently requested by the NCRWQCB (NCRWQCB, 2005a).

The NCRWQCB's letter (NCRWQCB, 2005a) also directed a revised monitoring program at the Site as follows: monitoring wells MW-1, MW-2, MW-3, MW-5, MW-7, MW-8, MW-9, MW-10, MW-11, and MW-14, and domestic wells DW-3, DW-4, DW-HD, and DW-HD2 to be removed from the Site monitoring program; and MW-4, MW-6, MW-12, and MW-13 to be placed on a semi-annual monitoring program. SCS issued a response letter (SCS, 2005c) concurring with the NCRWQCB's recommendation with the following exceptions, MW-3 and MW-9D continue to be sampled on an annual monitoring schedule. The NCRWQCB concurred with the changes to the sampling schedule (NCRWQCB, 2005b) and the changes will be implemented during the 3rd quarter 2005 monitoring and sampling event which is scheduled for the end of September 2005.

Access agreements were mailed to the owners of the properties at 4580 Hessel Road, and 5060 and 5025 Hessel Avenue on September 1, 2005 to request permission to access the named properties for the purpose of obtaining domestic water well samples. To date, SCS has not received a response from the owners of the properties at 5060 Hessel Avenue and 5025 Hessel Avenue. The owners of the property at 4580 Hessel Road indicated that a domestic well is

actually present at 4570 Hessel Road which serves both properties. SCS has received permission to sample this domestic well which will be performed during the next scheduled quarterly sampling event at the Site.

Closure

The work proposed herein will be performed upon receipt of NCRWQCB approval, and upon receipt of the necessary drilling and encroachment permits for work plan implementation. If pre-approval by the USTCF is re-instituted before the drilling event occurs, pre-approval will be requested prior to drilling.

Attachments **File 01203317.00**

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- PNEG, 2000c. Results of the 2nd Quarter 2000 Monitoring Event and Domestic Well Sampling at 4660 Hessel Road, Sebastopol, California, July 11.
- PNEG, 2000d. Results of the 3rd Quarter 2000 Monitoring Event and Domestic Well Sampling at 4660 Hessel Road, Sebastopol, California, September 5.
- PNEG, 2000e. Report of Investigation, 4th Quarter 2000 Monitoring Event with Domestic Well Sampling, and Interim Remediation Plan at 4660 Hessel Road, Sebastopol, California, December 29.
- PNEG, 2001a. Results of the 1st Quarter 2001 Monitoring Event and Domestic Well Sampling Event at 4660 Hessel Road, Sebastopol, California, April 3.
- PNEG, 2001b. Work Plan for 4660 Hessel Road, Sebastopol, California, July 13.
- PNEG, 2001c. Results of the 2nd Quarter 2001 Monitoring Event and Domestic Well Sampling Event at 4660 Hessel Road, Sebastopol, California, July 30.
- PNEG, 2001d. Results of the 3rd Quarter 2001 Groundwater Monitoring and Domestic Well Sampling Event at 4660 Hessel Road, Sebastopol, California, October 17.
- PNEG, 2002a. Results of the 4th Quarter 2001 Groundwater Monitoring and Sampling Event at 4660 Hessel Road, Sebastopol, California, January 14.
- PNEG, 2002b. Report on Excavation at 4660 Hessel Road, Sebastopol, California, February 27.
- PNEG, 2002c. Results of the 1st Quarter 2002 Groundwater Monitoring and Sampling Event at 4660 Hessel Road, Sebastopol, California, May 15.
- PNEG, 2002d. Results of the 2nd Quarter 2002 Groundwater Monitoring and Sampling Event at 4660 Hessel Road, Sebastopol, California, July 18.
- PNEG, 2002e. Results of the 3rd Quarter 2002 Groundwater Monitoring and Sampling Event at 4660 Hessel Road, Sebastopol, California, September 24.
- PNEG, 2002f. Work Plan to Study the Surface Water-Groundwater Interaction at 4660 Hessel Road, Sebastopol, California, December 12.
- PNEG, 2003a. Results of the 4th Quarter 2002 Groundwater Monitoring and Sampling Event at 4660 Hessel Road, Sebastopol, California, January 21.
- PNEG, 2003b. Work Plan for Additional Investigation at 4660 Hessel Road, Sebastopol, California, February 21.
- PNEG, 2003c. Results of the 1st Quarter 2003 Groundwater Monitoring and Sampling Event at 4660 Hessel Road, Sebastopol, California, April 24.
- PNEG, 2003d. Results of the 2nd Quarter 2003 Groundwater Monitoring and Sampling Event at 4660 Hessel Road, Sebastopol, California, July 10.
- SCS, 2003a. Results of the 3rd Quarter 2003 Groundwater Monitoring and Sampling Event at 4660 Hessel Road, Sebastopol, California, October 8.
- SCS, 2004a. Results of the 4th Quarter 2003 Groundwater Monitoring and Sampling Event at 4660 Hessel Road, Sebastopol, California, January 12.
- SCS, 2004b. Results of Additional Subsurface Investigation and Work Plan for Additional Subsurface Investigation at 4660 Hessel Road, Sebastopol, California, April 30.
- SCS, 2004c. Work Plan for Additional Subsurface Investigation at 4660 Hessel Road, Sebastopol, California, July 20.

SCS, 2004d. Results of the 2nd Quarter 2004 Groundwater Monitoring and Sampling Event at 4660 Hessel Road, Sebastopol, California, August 10.
SCS, 2004e. Work Plan Addendum, September 2.
SCS, 2004f. Results of the 3rd Quarter 2004 Groundwater Monitoring and Sampling Event at 4660 Hessel Road, Sebastopol, California, November 15.
SCS, 2005a. Results of the 4th Quarter 2004 Groundwater Monitoring and Sampling Event at 4660 Hessel Road, Sebastopol, California, April 7.
SCS, 2005b. Results of Additional Subsurface Investigation at 4660 Hessel Road, Sebastopol, California, May 13.
SCS, 2005c. Results of the 2nd Quarter 2005 Groundwater Monitoring and Sampling Event 4660 Hessel Road, Sebastopol, California, September 19.

Distribution List
File No. 01203317.00

Mr. John Riddell
4660 Hessel Road
Sebastopol, CA 95472

Mr. & Mrs. Gary and Victoria Giuliani
4620 Hessel Road
Sebastopol, CA 95472

Mr. Paul McBride
4660 Hessel Road, Unit B
Sebastopol, CA 95472

Mr. John Anderson
SCDHS
475 Aviation Blvd., Suite 220
Santa Rosa, California 95403



SCS ENGINEERS

3645 WESTWIND BOULEVARD
SANTA ROSA, CA 95403
PH. (707) 546-9461 FAX (707) 544-5769

PROJ. NO:
01203317.00

DATE:
10/07/03

TAKEN BY:

CREATED BY
JJM

FILE:
6119_SiteLocMap

APP. BY:

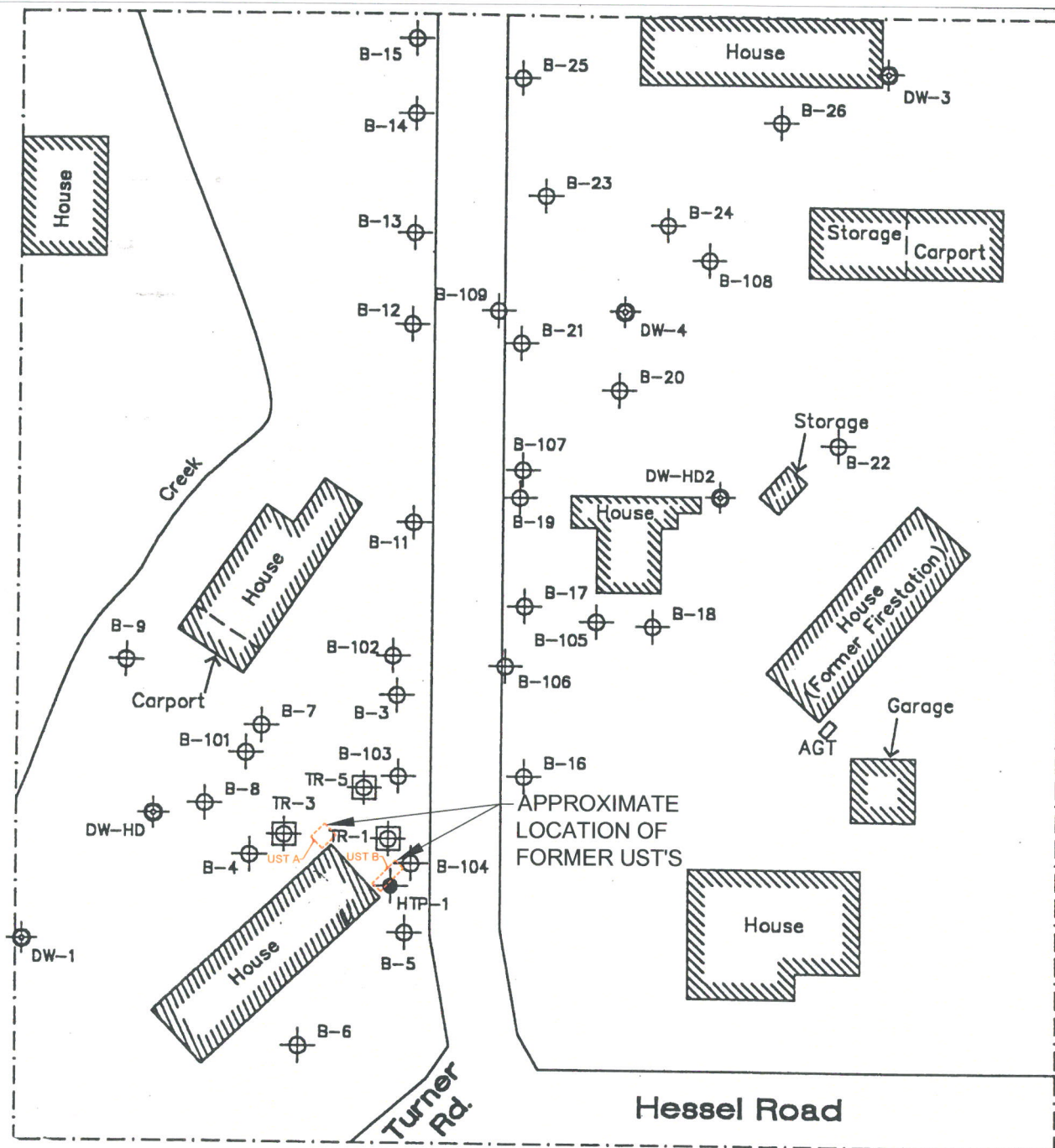
SITE LOCATION MAP

John Riddell
4660 Hessel Road
Sebastopol, California

APPROX. SCALE

FIGURE

1



*11/10/94 Spectrum E.S.I. Urban Geophysics; San Fernando, CA.

UST A = 290 GALLON CAPACITY (GASOLINE)
UST B = 575 GALLON CAPACITY (GASOLINE)

LEGEND

- Trench Soil Sample Locn
- Boring/Hydropunch Location
- Monitoring Well Location
- Water Supply Well
- Soil Sample Location

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SANTA ROSA, CALIFORNIA 94503
PH. (707) 946-5461 FAX. (707) 544-5769

PROJ. NO.	3317.00	DWN. BY:	ALP	ACAD. FILE:	3317.00-HIST. BORINGS - 3-05
DATE	3/24/05	CHK. BY:	KLC	APP. BY:	KLC

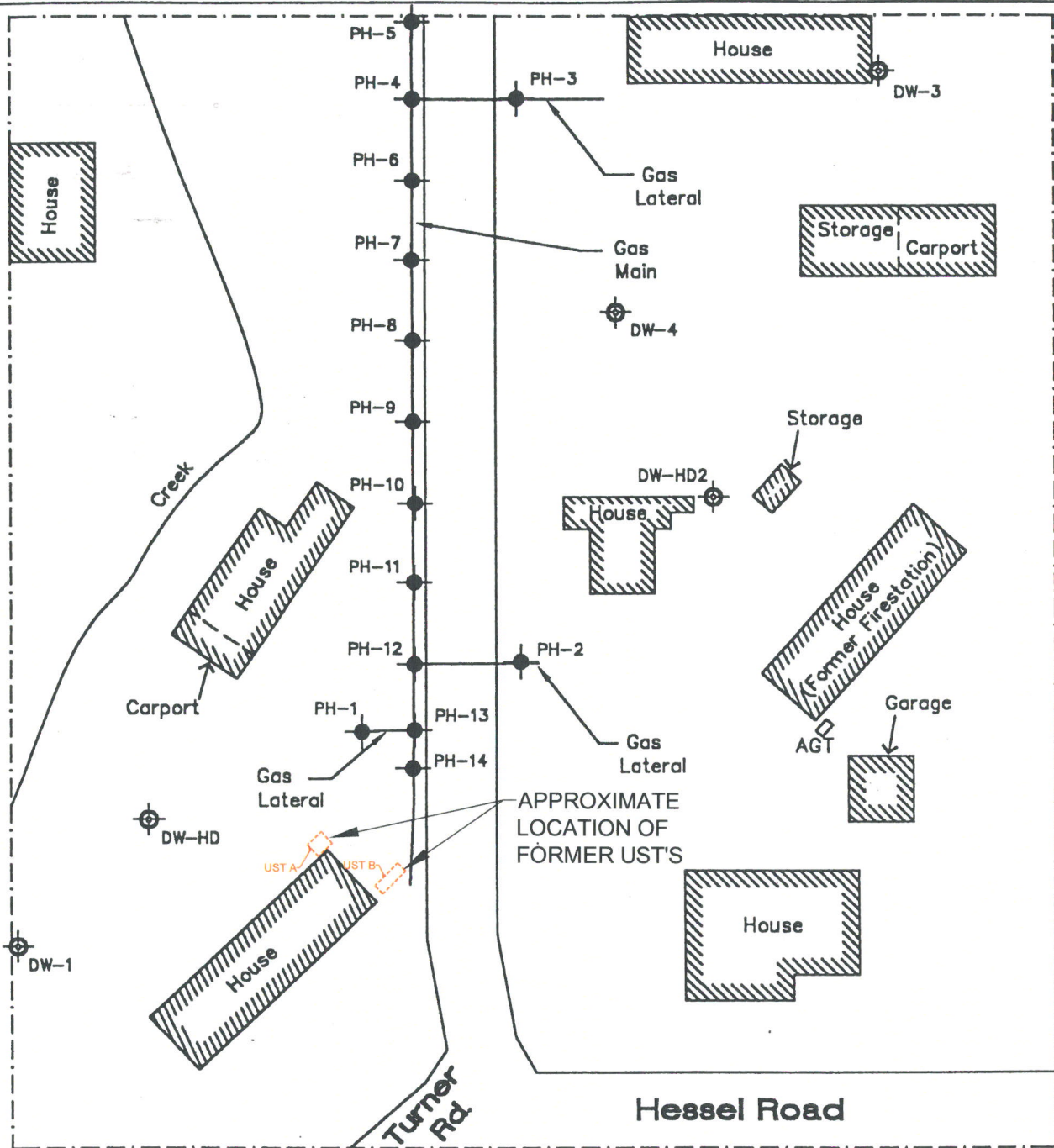
SHEET TITLE: SITE PLAN - BORINGS - 1994, 1995 & 1997

PROJECT TITLE:

JOHN RIDDELL
4660 HESSEL ROAD
SEBASTOPOL, CALIFORNIA

SCALE:
1" = 50'

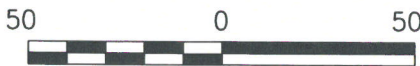
FIGURE NO.
2



*11/10/94 Spectrum E.S.I. Urban Geophysics; San Fernando, CA.

UST A = 290 GALLON CAPACITY (GASOLINE)
UST B = 575 GALLON CAPACITY (GASOLINE)

APPROXIMATE SCALE IN FEET



LEGEND

- Soil Sample Location
- Water Supply Well

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PROJ. NO.	3317.00	DWN. BY:	ALP	ACAD. FILE:	3317.00-T_SAMP_-3-05
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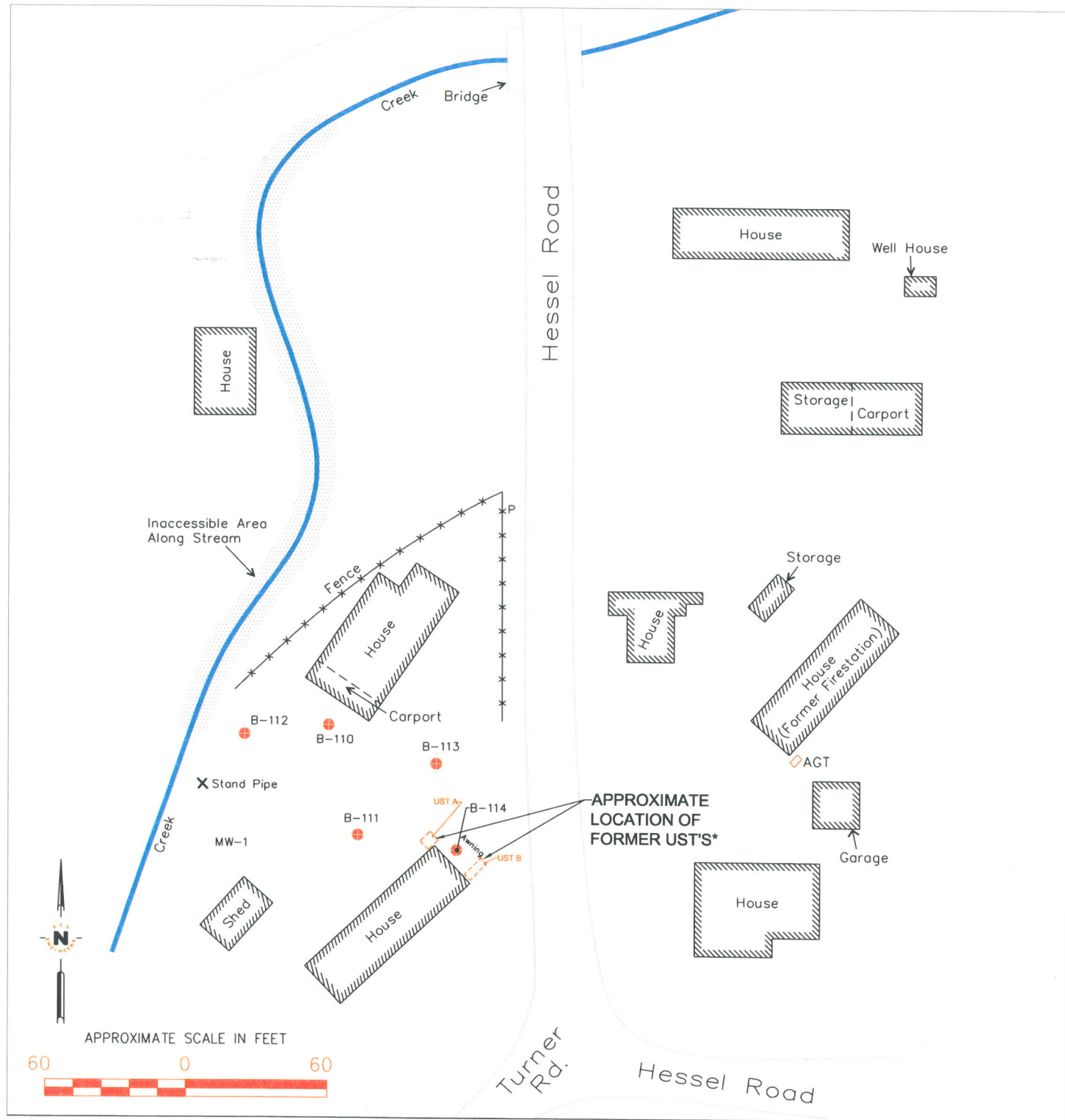
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PROJECT TITLE:

JOHN RIDDELL
4660 HESSEL ROAD
SEBASTOPOL, CALIFORNIA

SCALE:
1" = 50'

FIGURE NO.
3



*11/10/94 Spectrum E.S.I. Urban Geophysics; San Fernando, CA.

LEGEND

● Boring Location - 1999

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PH. (707) 946-5461 FAX. (707) 544-5769

PROJ. NO.	3317.00	DWN. BY:	JJM	ACAD FILE:	3317.00-SP-1999
DATE	4/06/05	CHK. BY:	KLC	APP. BY:	KLC

SHEET TITLE:

SITE PLAN - BORINGS - 1999

PROJECT TITLE:

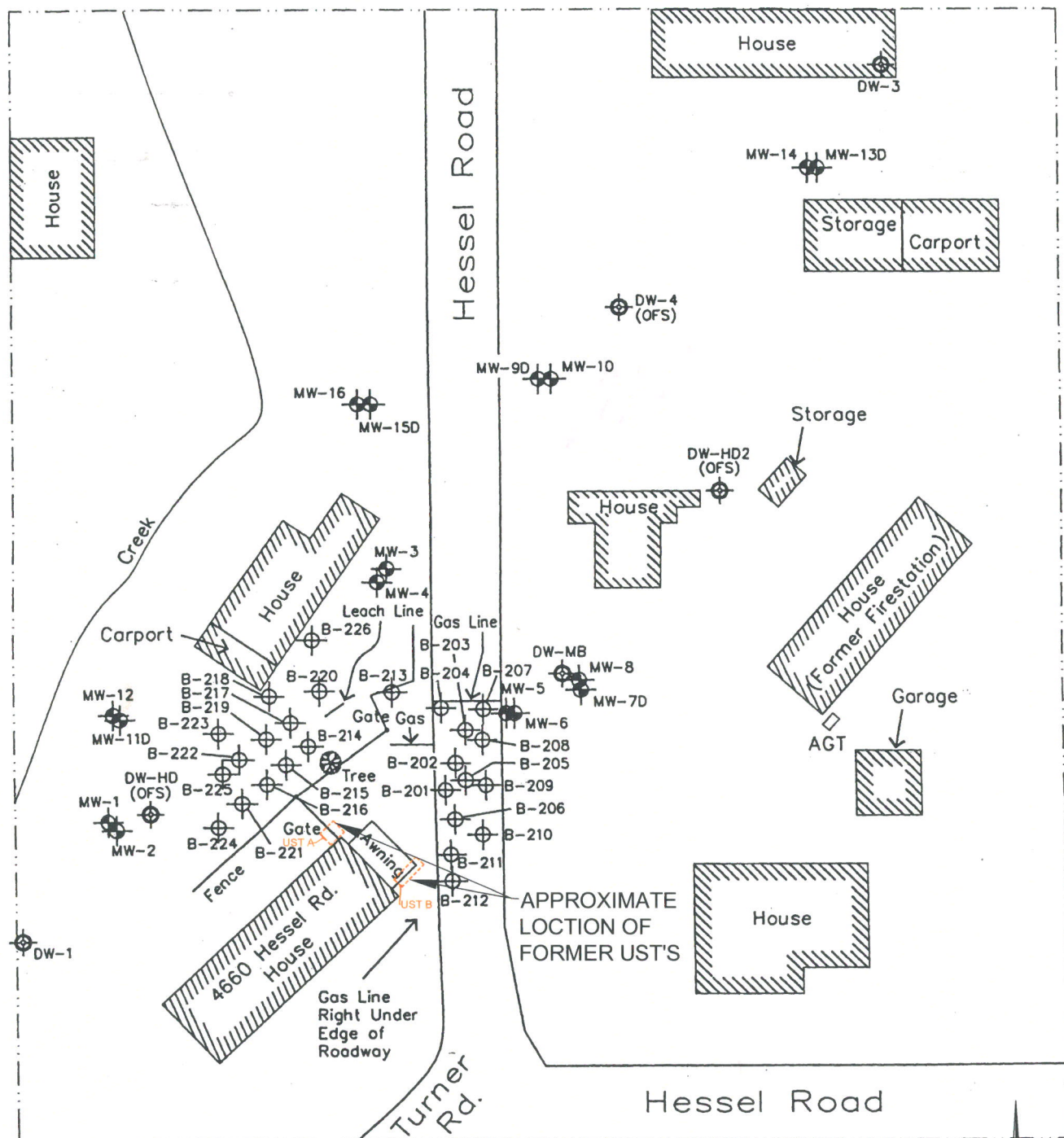
JOHN RIDDELL
4660 HESSEL ROAD
SEBASTOPOL, CALIFORNIA

SCALE:

1" = 60'

FIGURE NO.

4



*11/10/94 Spectrum E.S.I. Urban Geophysics; San Fernando, CA.

UST A = 290 GALLON CAPACITY (GASOLINE)
UST B = 575 GALLON CAPACITY (GASOLINE)

APPROXIMATE SCALE IN FEET



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PH. (707) 946-5461 FAX. (707) 544-5769

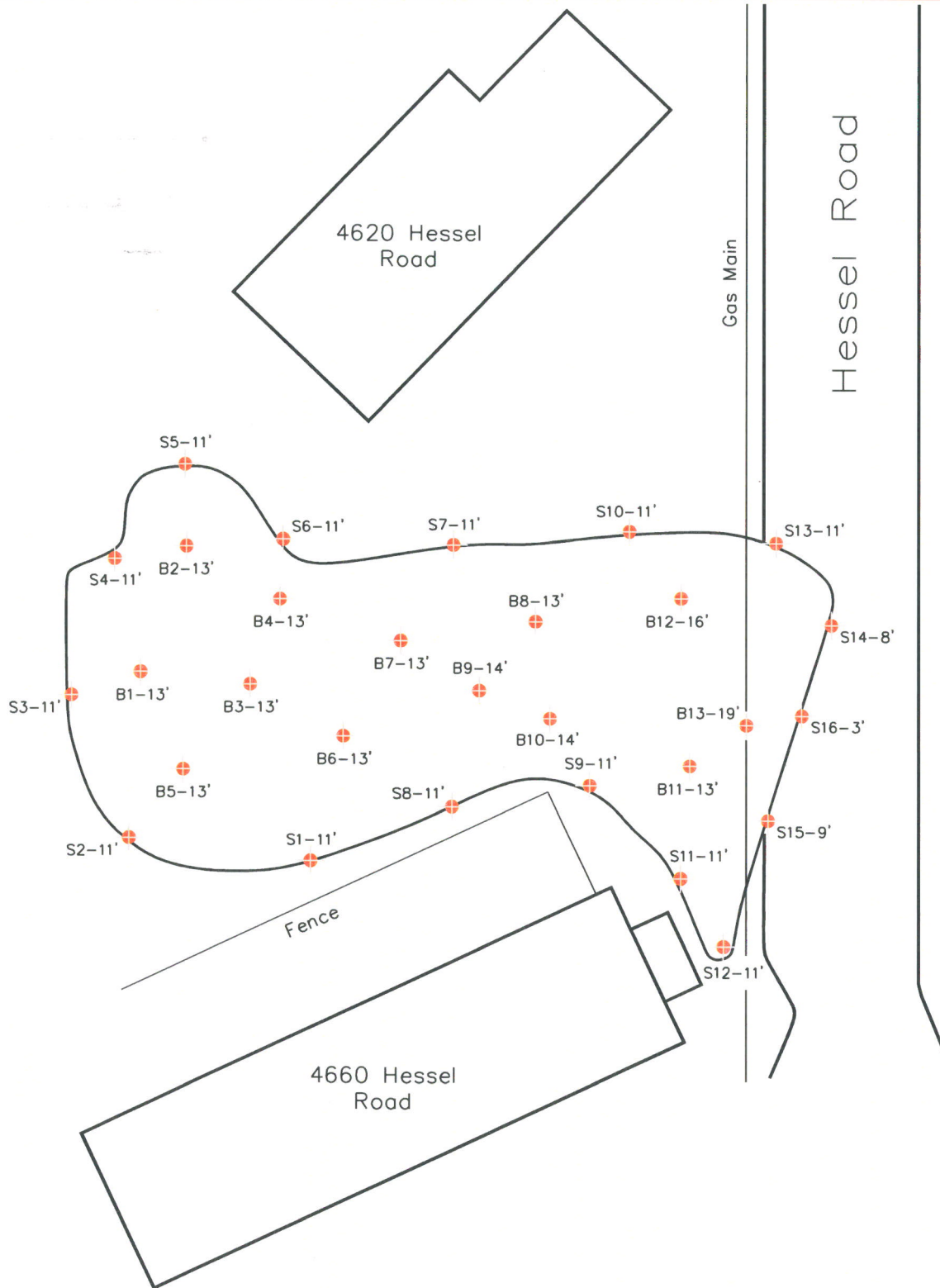
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DATE	3/24/05	CHK. BY:	KLC	APP. BY:	KLC

SHEET TITLE: SITE PLAN - EXCAVATION LIMIT BORINGS - 2001

PROJECT TITLE:
JOHN RIDDELL
4660 HESSEL ROAD
SEBASTOPOL, CALIFORNIA

SCALE:
1" = 50'

FIGURE NO.
5



APPROXIMATE SCALE IN FEET



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PH. (707) 946-5461 FAX. (707) 544-5769

PROJ. NO.	01203317.00	DRAWN BY:	JJM	ACAD FILE:	3317.00_SitePlan
DATE	4/30/04	CHECK BY:	KLC	APP. BY:	

SHEET TITLE

SITE PLAN - EXCAVATION SAMPLE LOCATIONS - 2001

PROJECT TITLE

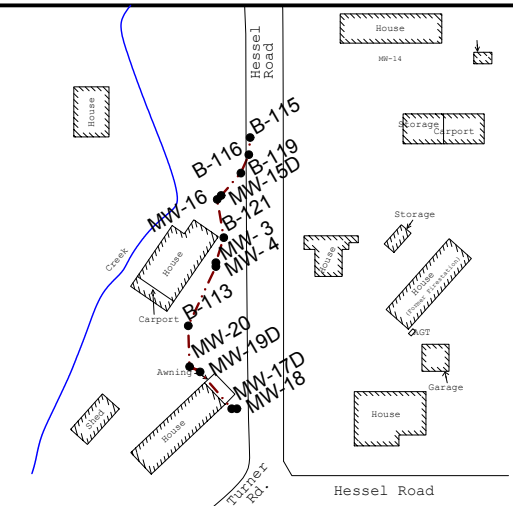
JOHN RIDDELL
4660 HESSEL ROAD
SEBASTOPOL, CALIFORNIA

SCALE:

1" = 20'

FIGURE NO.

6



LEGEND:

MW-01 Boring I.D.

TPH-g Analyte

Conductor casing

Screened interval of wells

Water Level At Time of Drilling



Static Water Level from Top of Casing (4th Quarter, 2004)

Borehole Lithology

Analytical result <0.005

TPH-g	Concentration of Total Petroleum Hydrocarbons as gasoline reported from laboratory analysis by EPA Method 8015B.
(w)	Aqueous samples (initial drilling results)
(w*)	Aqueous samples (4th Quarter, 2004 results)
<	Less-than numerical value of the detection limit.
mg/kg	Milligrams per kilogram (soil samples)
ug/L	Micrograms per Liter (aqueous samples)

Vertical Exaggeration: 2.5x

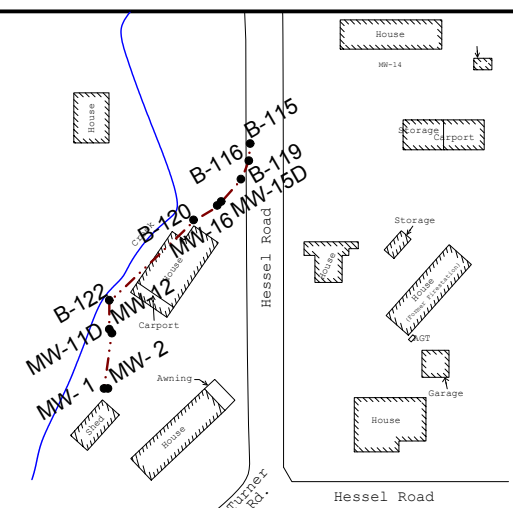
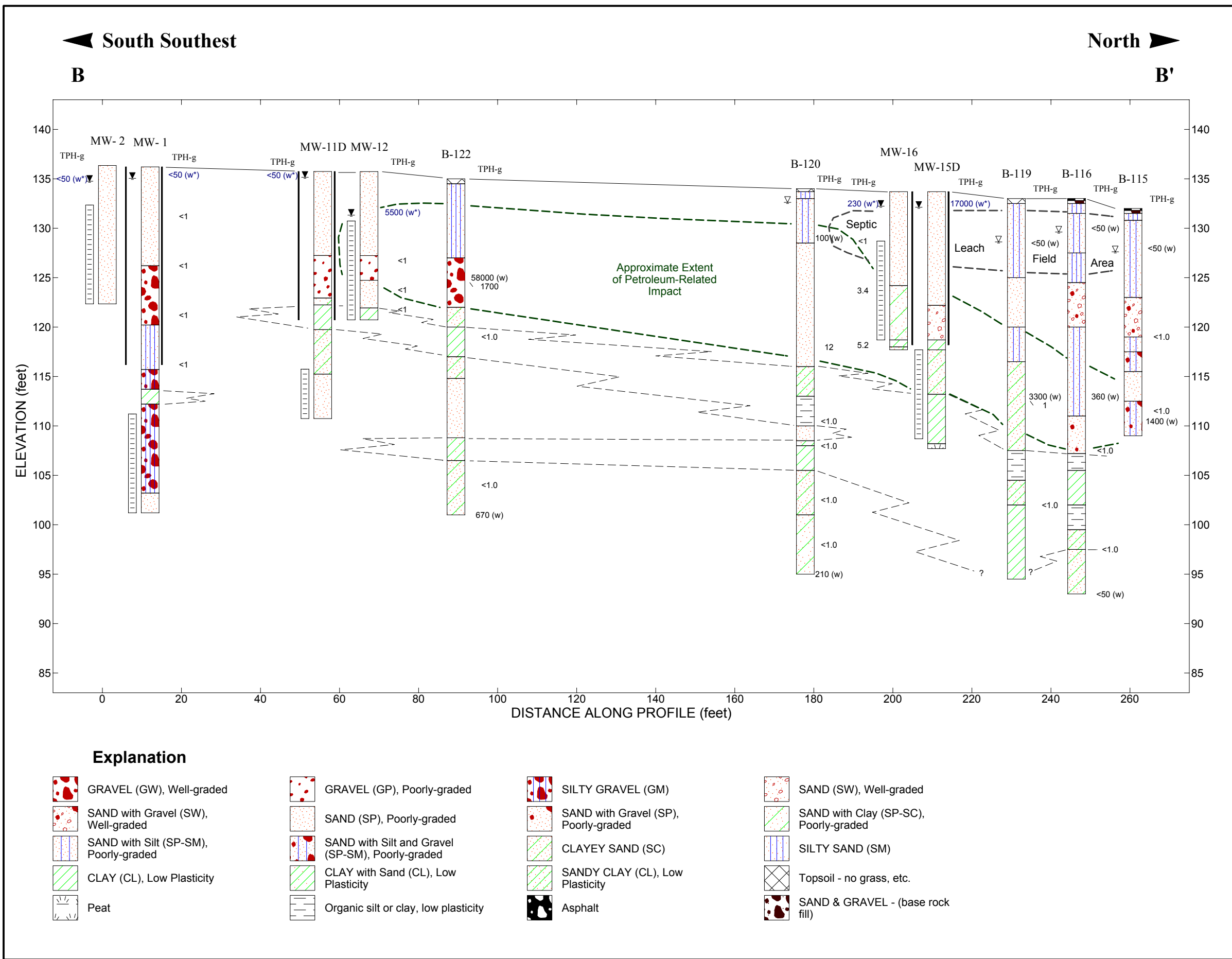
								
	4-5-05	ISSUED FOR REVIEW		SK				
NO.	DATE	REVISIONS		DRN	CHK	DGS	<u>ENG</u> GS	CHF ENG

SCS ENGINEERS

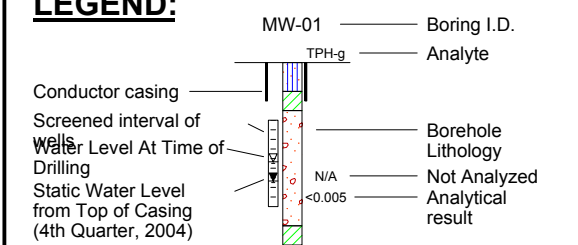
John Riddell
4660 Hessel Road
Sebastopol, California 95472

Geologic Section A - A'

SCALE	JOB NO.	FIGURE NO.	REV.
1" = 25.0'	01203317.00	8	1





LEGEND:



TPH-g	Concentration of Total Petroleum Hydrocarbons as gasoline reported from laboratory analysis by EPA Method 8015B.
(w)	Aqueous samples (initial drilling results)
(w*)	Aqueous samples (4th Quarter, 2004 results)
<	Less-than numerical value of the detection limit.
mg/kg	Milligrams per kilogram (soil samples)
ug/L	Micrograms per Liter (aqueous samples)

Vertical Exaggeration: 2.5x

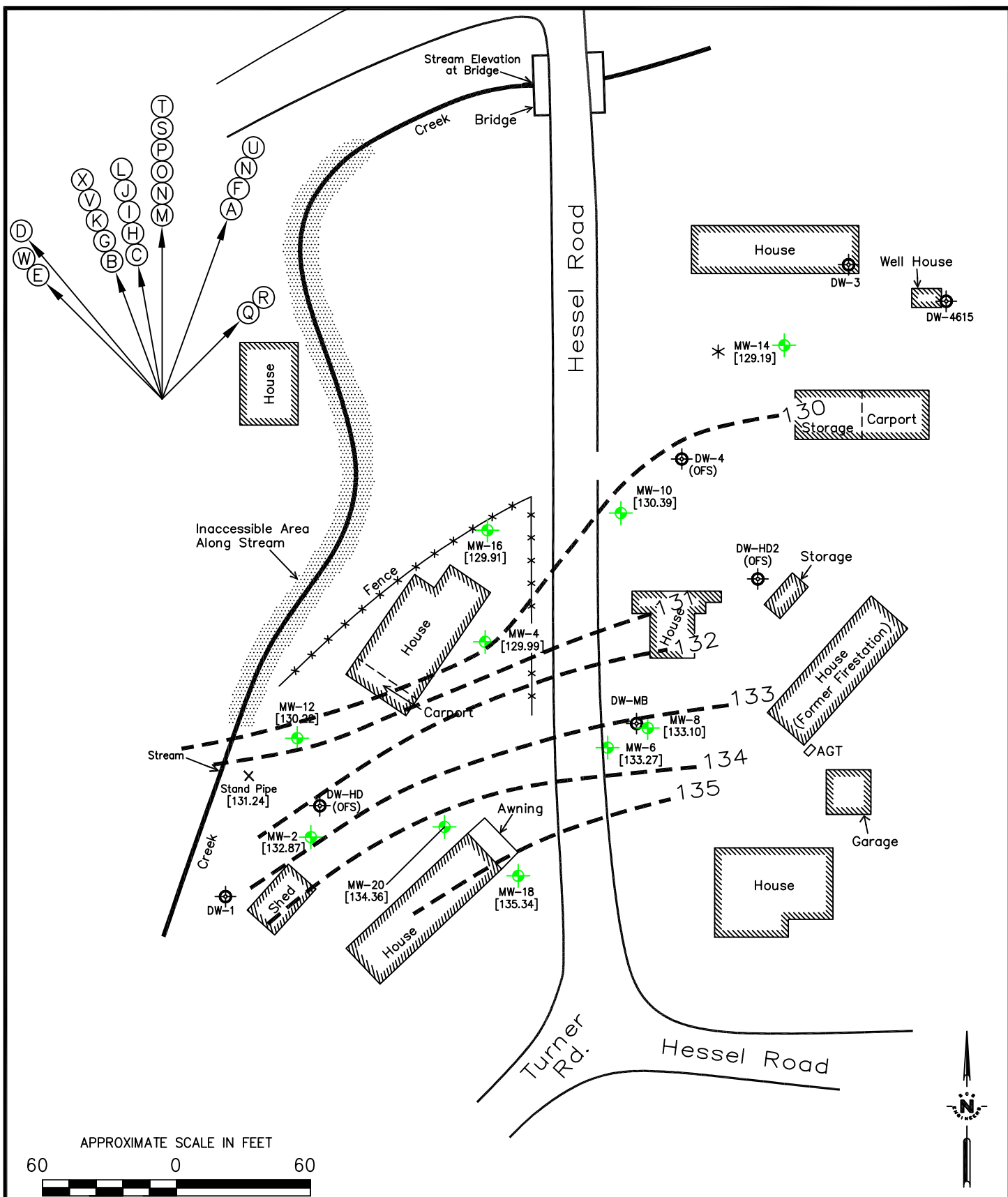
								
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NO.	DATE	REVISIONS		DRN	CHK	DGS	<u>ENG</u> GS	CHF ENG

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Sebastopol, California 95472

Geologic Section B - B'

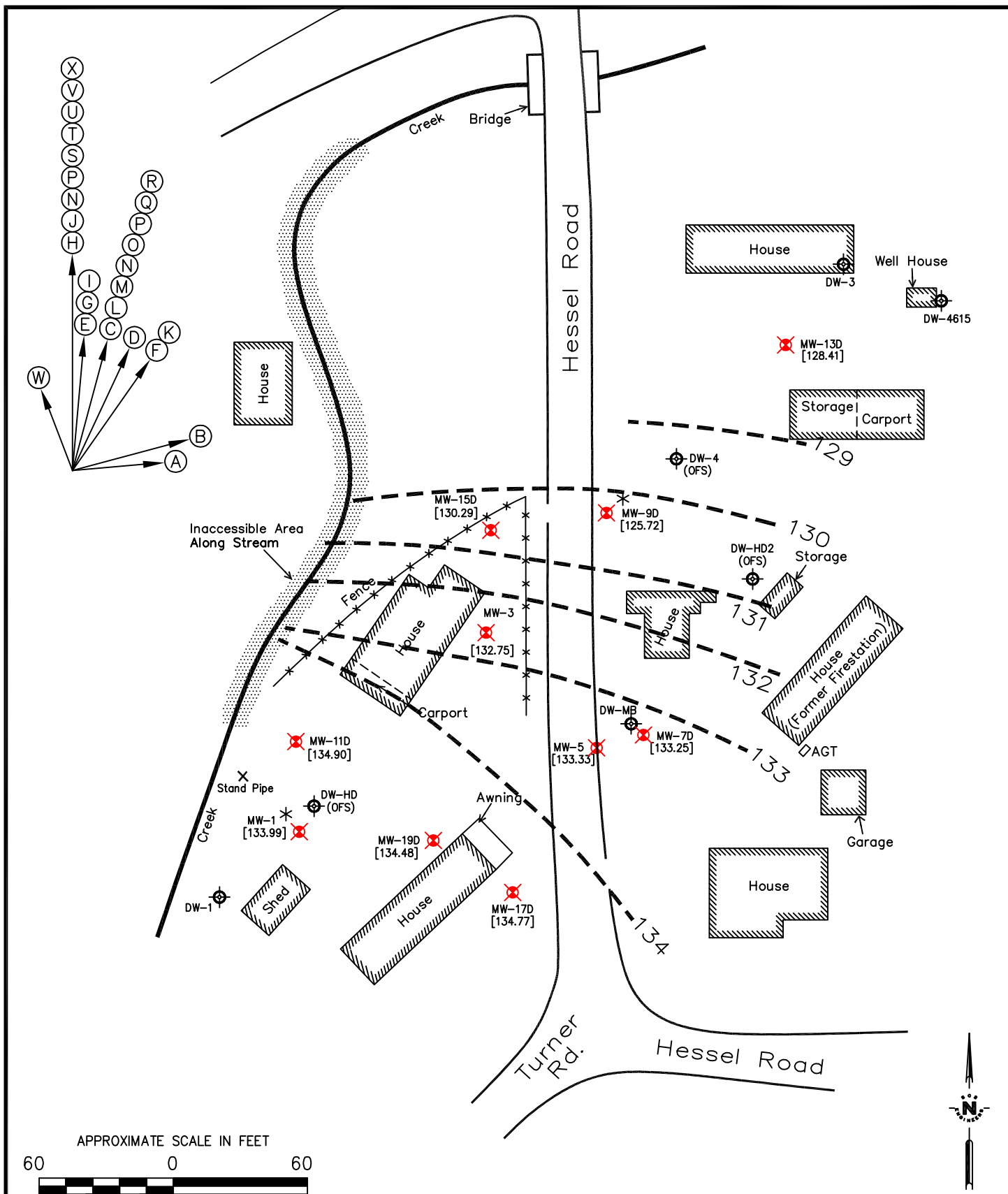
SCALE	JOB NO.	FIGURE NO.	REV.
1" = 25.0'	01203317.00	9	1



SCS ENGINEERS ENVIRONMENTAL CONSULTANTS 3645 WESTWIND BOULEVARD SANTA ROSA, CALIFORNIA 95403 PH. (707) 546-9461 FAX. (707) 544-5769			SHEET TITLE: SITE PLAN GROUNDWATER FLOW DIRECTION & GRADIENT-SHALLOW WELLS, JUNE 2005	SCALE: 1" = 60'
PROJ. NO.: 3317.00 DATE: 9/2/05			PROJECT TITLE: JOHN RIDDELL 4660 HESSEL ROAD SEBASTOPOL, CALIFORNIA	FIGURE NO.: 1 OF 2
DWN. BY: AJH CHK. BY:	ACAD FILE: 3317.00-GW.SX-3505 APP. BY: SK			

GROUNDWATER FLOW LEGEND

[illegible]



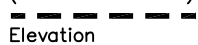
SCS ENGINEERS			SHEET TITLE:		SITE PLAN	SCALE:
ENVIRONMENTAL CONSULTANTS			GROUNDWATER FLOW DIRECTION & GRADIENT-DEEP WELLS, JUNE 2005			1" = 60'
3645 WESTWIND BOULEVARD SANTA ROSA, CALIFORNIA 95403 PH. (707) 546-9461 FAX. (707) 544-5769			PROJECT TITLE:		JOHN RIDDELL 4660 HESSEL ROAD SEBASTOPOL, CALIFORNIA	FIGURE NO.:
PROJ. NO.:	3317.00	DWN. BY:	AJH	ACAD FILE:	3317.00-GW.dX-3505	
DATE:	9/2/05	CHK. BY:		APP. BY:	SK	1 OF 2

GROUNDWATER FLOW LEGEND

Estimated Groundwater
Gradient Direction



Equipotential Line
(Interval = 1.0 ft)



Identifier
Tag

Date

Est Flow
Direction

Gradient
Slope



Water Supply Well



Monitoring Well Location

DW = Domestic Well

HD = Hand Dug

OFS = Out of Service

* MW-1 and MW-9D not
used to determine GW Flow
Direction & Gradient.

Identifier Tag	Date	Est Flow Direction	Gradient Slope
-------------------	------	-----------------------	-------------------

(A)	7/12/99	N85°E	i = 0.02
-----	---------	-------	----------

(B)	10/20/99	N75°E	i = 0.03
-----	----------	-------	----------

(C)	1/11/00	N15°E	i = 0.02
-----	---------	-------	----------

(D)	4/18/00	Not Calculated	
-----	---------	----------------	--

(E)	7/20/00	N5°E	i = 0.02
-----	---------	------	----------

(F)	11/7/00	N35°E	i = 0.025
-----	---------	-------	-----------

(G)	2/28/01	N5°E	i = 0.02
-----	---------	------	----------

(H)	5/29/01	North	i = 0.05
-----	---------	-------	----------

(I)	8/22/01	N5°E	i = 0.04
-----	---------	------	----------

(J)	11/26/01	North	i = 0.03
-----	----------	-------	----------

(K)	2/25/02	N35°E	i = 0.03
-----	---------	-------	----------

(L)	5/29/02	N-NE	i = 0.02
-----	---------	------	----------

(M)	8/26/02	N-NE	i = 0.02
-----	---------	------	----------

(N)	11/19/02	N-NE	i = 0.02
-----	----------	------	----------

(O)	2/18/03	N-NE	i = 0.05
-----	---------	------	----------

(P)	5/14/03	N-NE	i = 0.02
-----	---------	------	----------

(Q)	8/20/03	N-NE	i = 0.02
-----	---------	------	----------

(R)	11/20/03	N-NE	i = 0.02
-----	----------	------	----------

(S)	3/2/04	Northerly	i = 0.04
-----	--------	-----------	----------

(T)	6/7/04	N-NE	i = 0.04
-----	--------	------	----------

(U)	9/2/04	Northerly	i = 0.03
-----	--------	-----------	----------

(V)	1/4/05	Northerly	i = 0.03
-----	--------	-----------	----------

(W)	3/22/05	NNW	i = 0.02
-----	---------	-----	----------

(X)	6/8/05	Northerly	i = 0.03
-----	--------	-----------	----------

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PH. (707) 546-9461 FAX. (707) 544-5769

PROJ. NO.: 3317.00	DWN. BY: AJH	ACAD FILE: 3317.00-GW.dX-3505
DATE: 9/2/05	CHK. BY:	APP. BY: SK

SHEET TITLE:

SITE PLAN

GROUNDWATER FLOW DIRECTION & GRADIENT-DEEP WELLS, JUNE 2005

PROJECT TITLE:

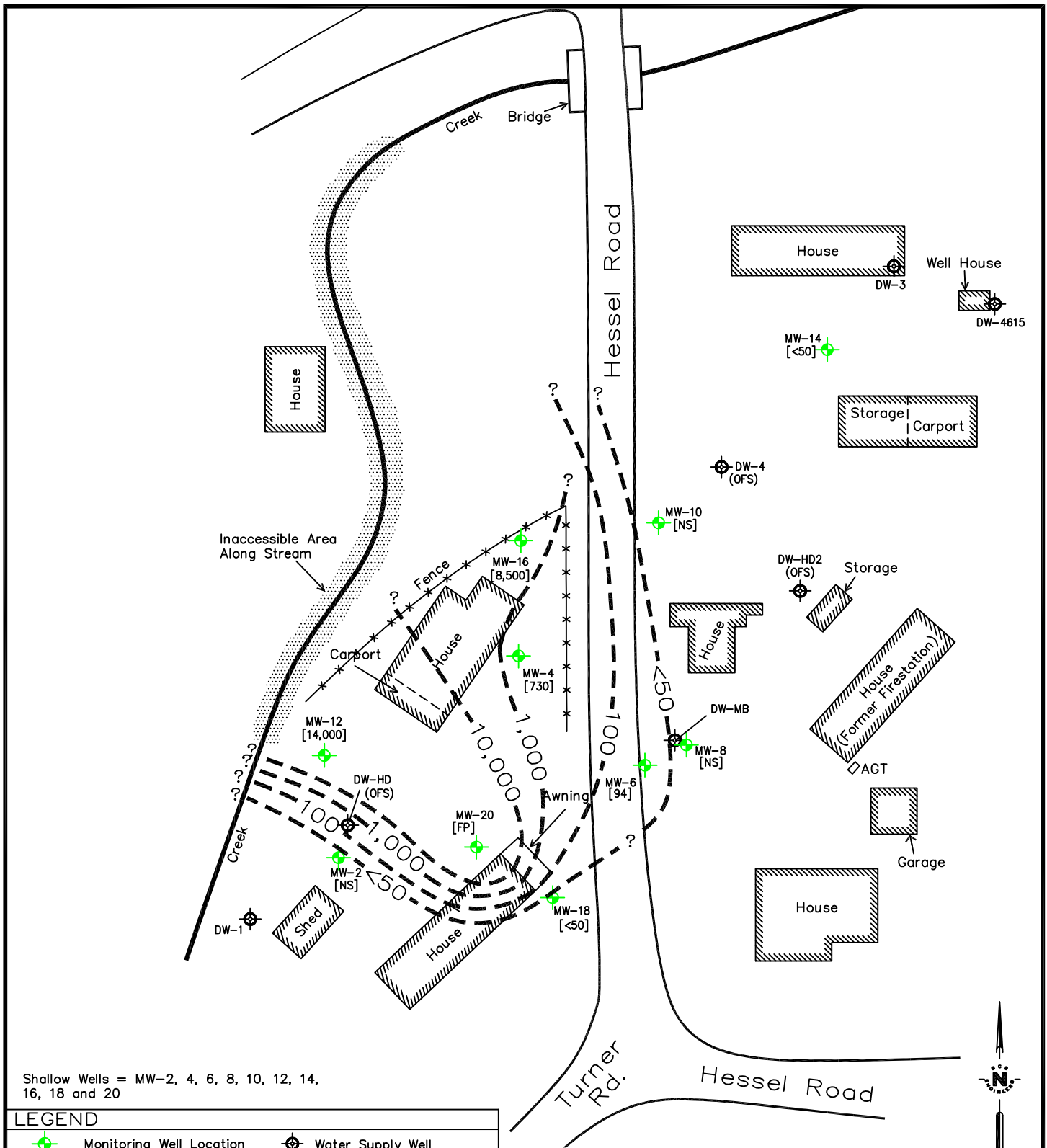
JOHN RIDDELL
4660 HESSEL ROAD
SEBASTOPOL, CALIFORNIA

SCALE:

1" = 60'

FIGURE NO.:

2 OF 2



Shallow Wells = MW-2, 4, 6, 8, 10, 12, 14, 16, 18 and 20

LEGEND

	Monitoring Well Location		Water Supply Well
	NS = Not Sampled		DW = Domestic Well
	FP = Free Product		HD = Hand Dug
	Isoconcentration Line		OFS = Out of Service
	TPH-g, ug/L		

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PROJ. NO.: 3317.00	DWN. BY: AJH	ACAD FILE: 3317.00-IS03A-3505
DATE: 9/2/05	CHK. BY:	APP. BY: SK

SHEET TITLE:

ISOCONCENTRATION MAP
TPH-G IN SHALLOW WELLS FOR JUNE 2005

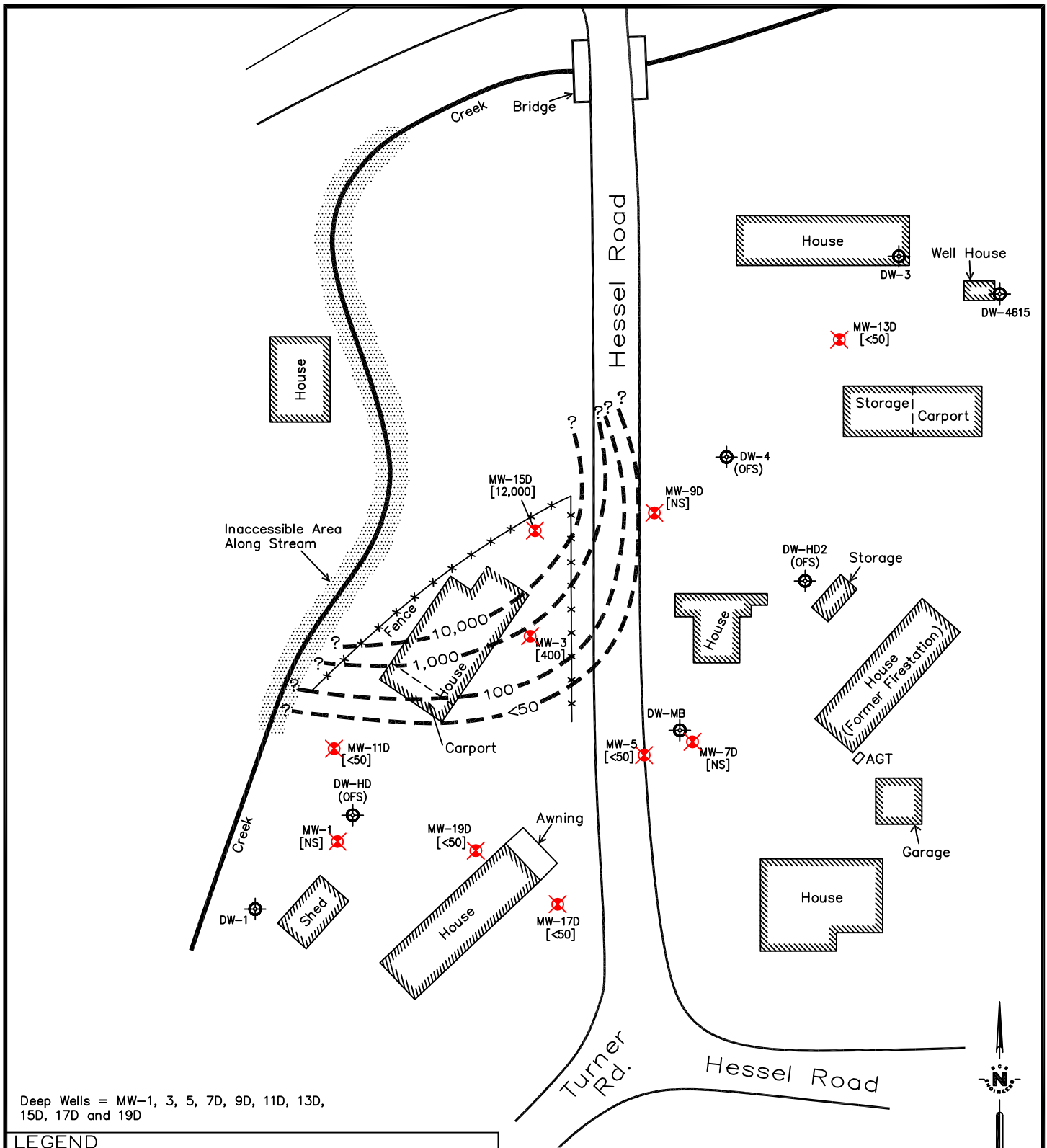
PROJECT TITLE:

JOHN RIDDELL
4660 HESSEL ROAD
SEBASTOPOL, CALIFORNIA

SCALE:

1" = 60'

FIGURE NO.:



Deep Wells = MW-1, 3, 5, 7D, 9D, 11D, 13D, 15D, 17D and 19D

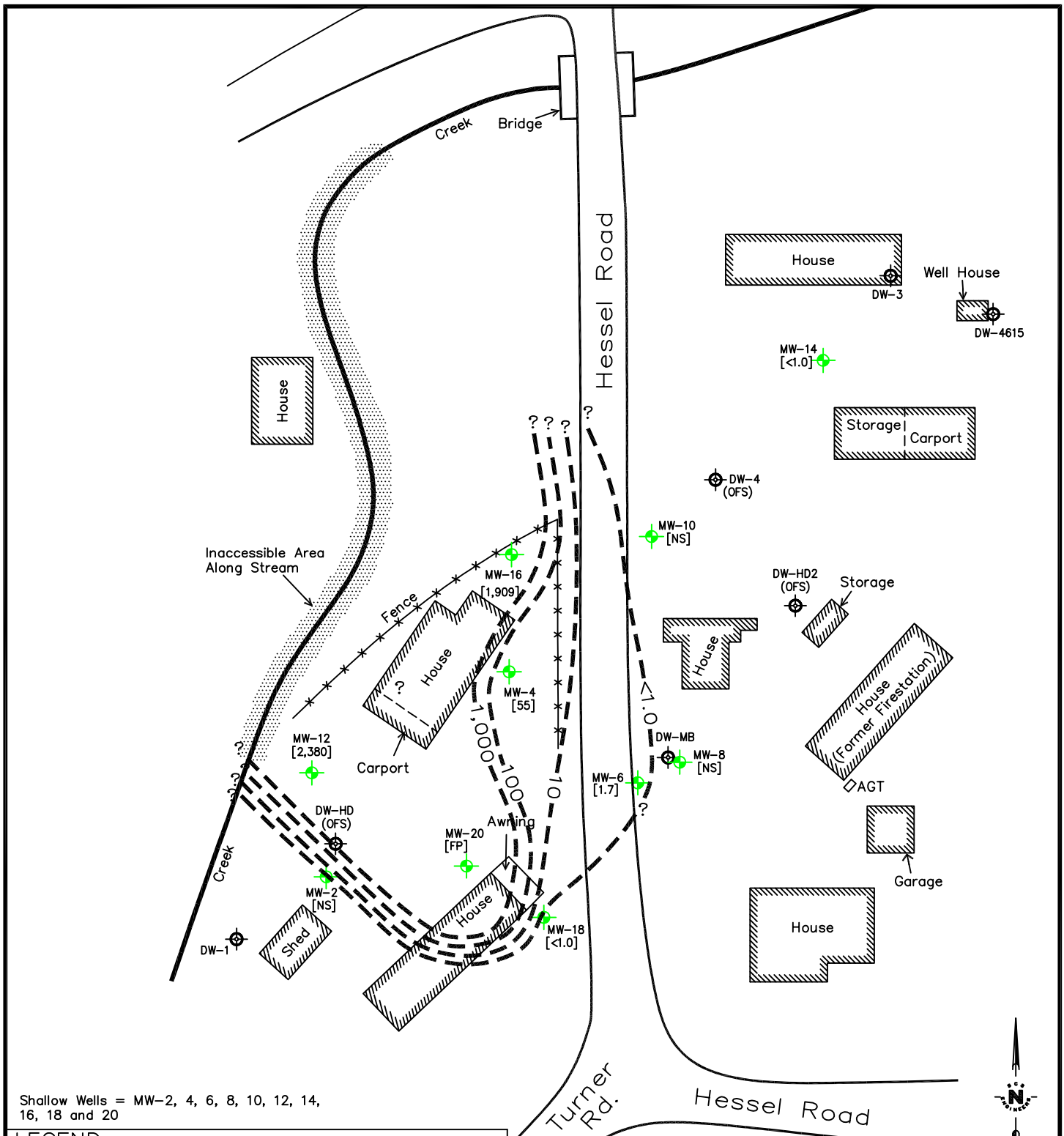
LEGEND			
	Monitoring Well Location		Water Supply Well
NS	= Not Sampled	DW	= Domestic Well
	Isoconcentration Line	HD	= Hand Dug
TPH-g, ug/L		OFS	= Out of Service

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 SANTA ROSA, CALIFORNIA 95403
 PH. (707) 546-9461 FAX. (707) 544-5769

PROJ. NO.: 3317.00	DWN. BY: AJH	ACAD FILE: 3317.00-IS03B-3498
DATE: 8/20/05	CHK. BY:	APP. BY: SK

SHEET TITLE:	ISOCONCENTRATION MAP TPH-g IN DEEP WELLS FOR JUNE 2005
PROJECT TITLE:	JOHN RIDDELL 4660 HESSEL ROAD SEBASTOPOL, CALIFORNIA

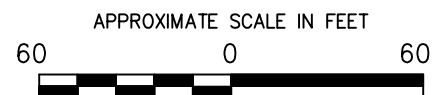
SCALE:	1" = 60'
FIGURE NO.:	



Shallow Wells = MW-2, 4, 6, 8, 10, 12, 14, 16, 18 and 20

LEGEND

	Monitoring Well Location		Water Supply Well
NS	= Not Sampled	DW	= Domestic Well
FP	= Free Product	HD	= Hand Dug
	Isoconcentration Line	OFS	= Out of Service
	ΣBTEX, ug/L		



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PH. (707) 546-9461 FAX. (707) 544-5769

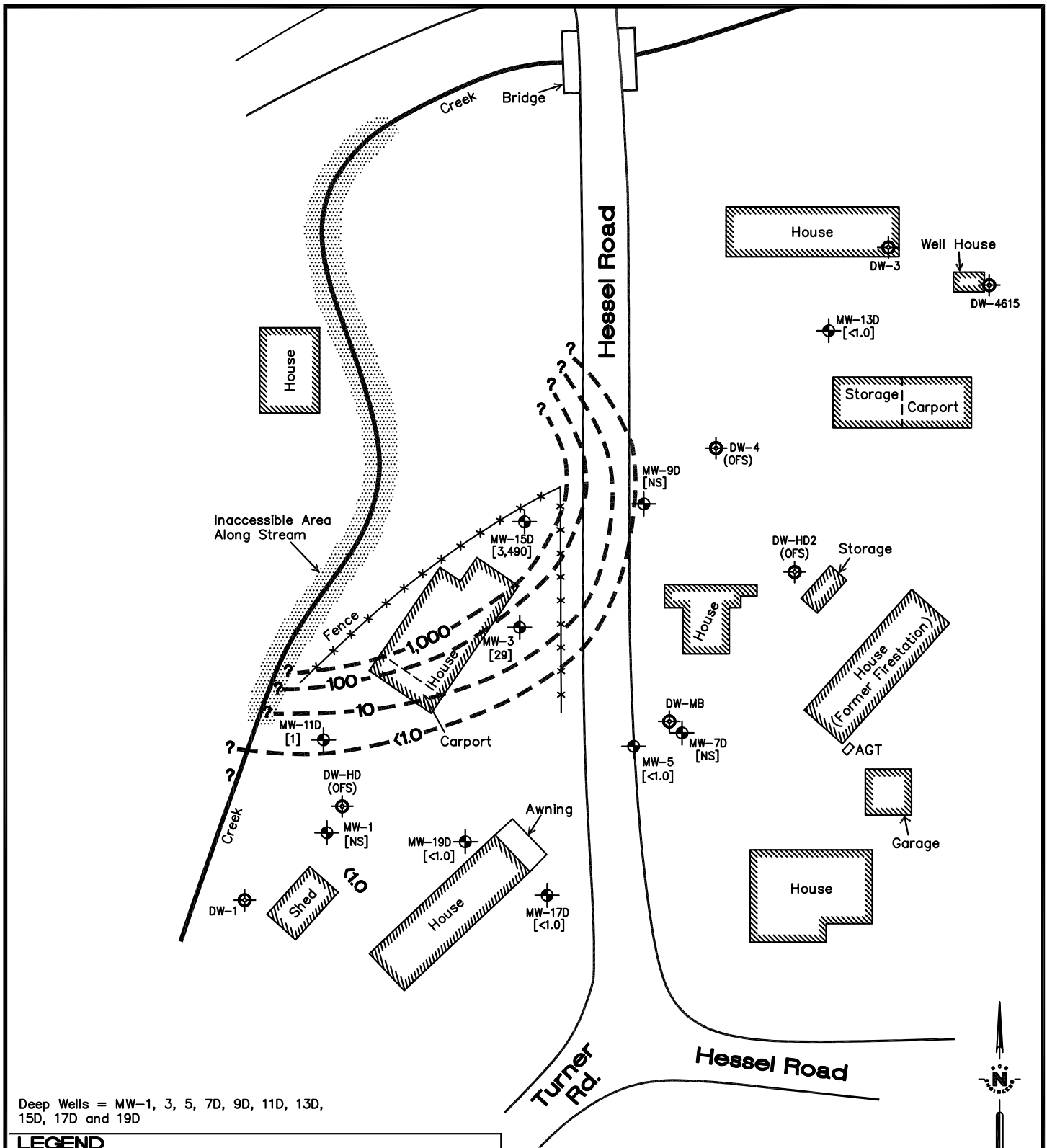
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DATE: 9/2/05	CHK. BY:	APP. BY: SK




SHEET TITLE: ISOCONCENTRATION MAP
ΣBTEX IN SHALLOW WELLS FOR JUNE 2005

PROJECT TITLE: JOHN RIDDELL
4660 HESSEL ROAD
SEBASTOPOL, CALIFORNIA

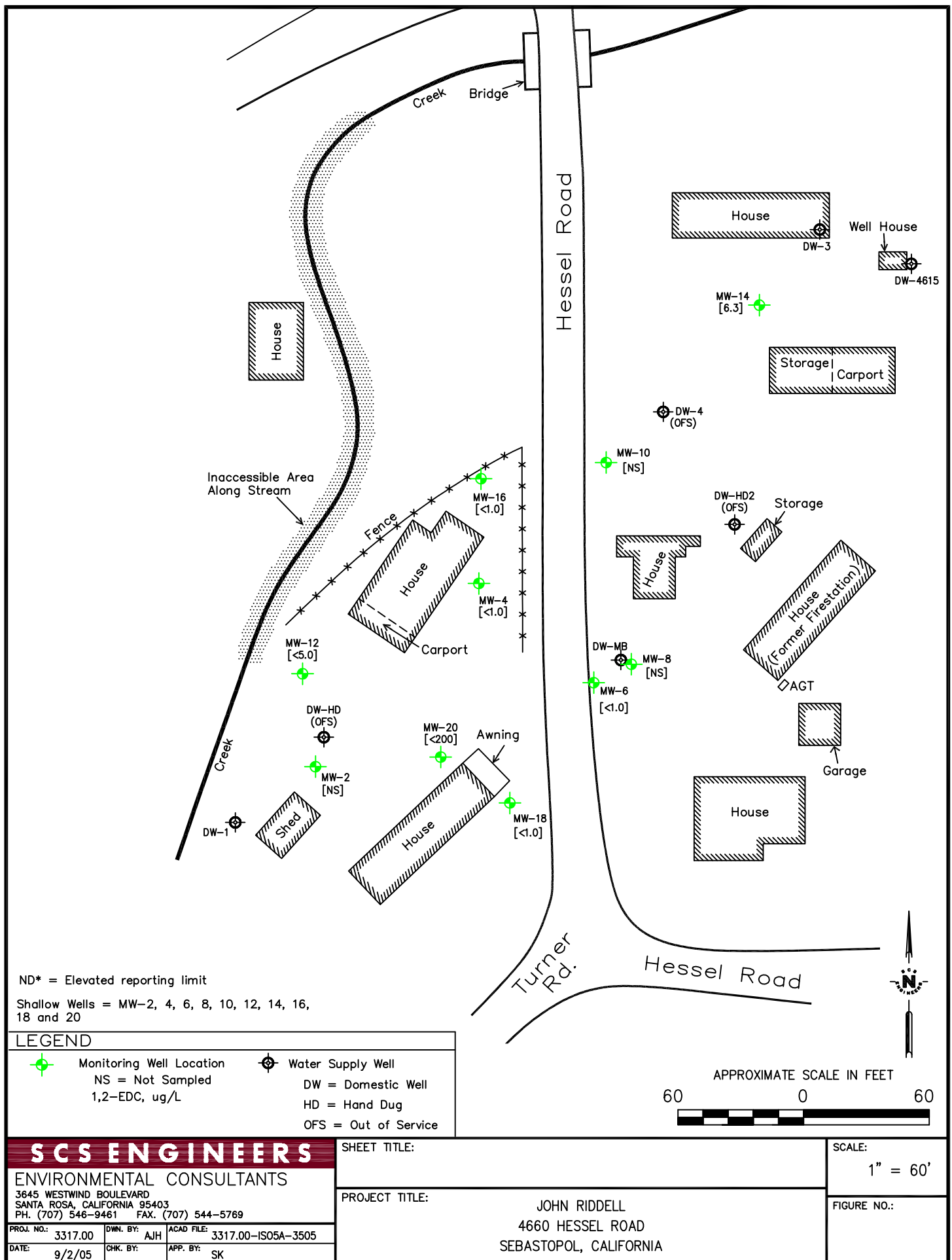
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1" = 60'

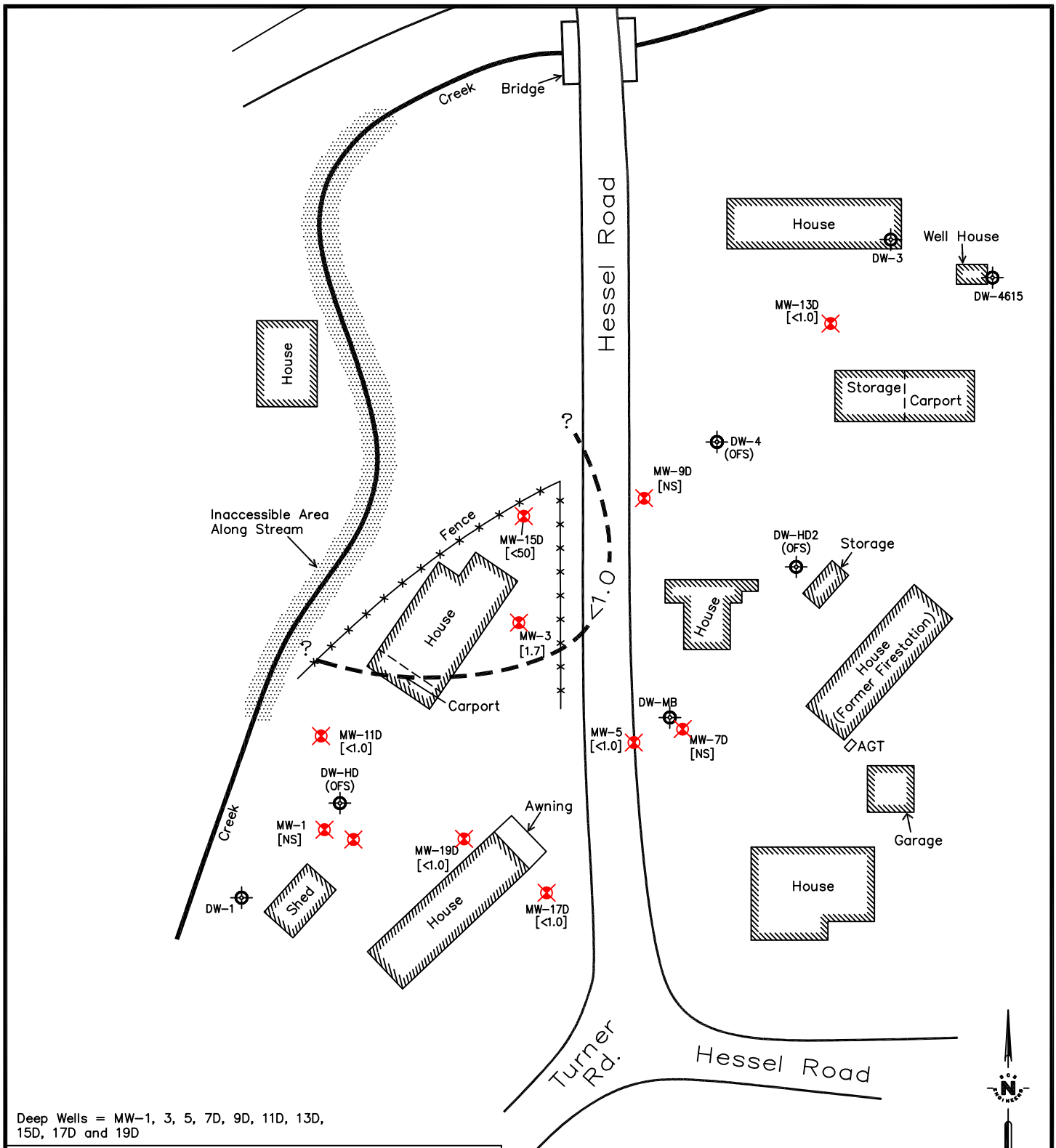
FIGURE NO.:



LEGEND			<div>APPROXIMATE SCALE IN FEET</div> <div>60060</div> <div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>		
	Monitoring Well Location				
NS = Not Sampled		DW = Domestic Well			
 Isoconcentration Line		HD = Hand Dug			
ΣBTEX, ug/L		OFS = Out of Service			

SCS ENGINEERS ENVIRONMENTAL CONSULTANTS 3645 WESTWIND BOULEVARD SANTA ROSA, CALIFORNIA 95403 PH. (707) 546-9461 FAX. (707) 544-5769	SHEET TITLE: ISOCONCENTRATION MAP Σ BTEX IN DEEP WELLS FOR JUNE 2005		SCALE: 1" = 60'
	PROJECT TITLE: JOHN RIDDELL 4660 HESSEL ROAD SEBASTOPOL, CALIFORNIA		FIGURE NO.:
PROJ. NO.: 3317.00	DWN. BY: AJH	ACAD. FILE: 3317.00-IS04B-3498	
DATE: 8/23/05	CHK. BY:	APP. BY: SK	

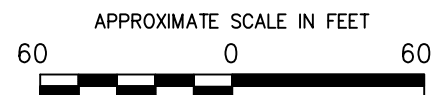




Deep Wells = MW-1, 3, 5, 7D, 9D, 11D, 13D, 15D, 17D and 19D

LEGEND

	Monitoring Well Location		Water Supply Well
	NS = Not Sampled		DW = Domestic Well
	Isoconcentration Line		HD = Hand Dug
	1,2-EDC, ug/L		OFS = Out of Service



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PH. (707) 546-9461 FAX. (707) 544-5769

PROJ. NO.: 3317.00	DWN. BY: AJH	ACAD FILE: 3317.00-IS05B-3498
DATE: 8/20/05	CHK. BY:	APP. BY: SK

SHEET TITLE:

ISOCONCENTRATION MAP
EDC IN DEEP WELLS FOR JUNE 2005

PROJECT TITLE:

JOHN RIDDELL
4660 HESSEL ROAD
SEBASTOPOL, CALIFORNIA

SCALE:

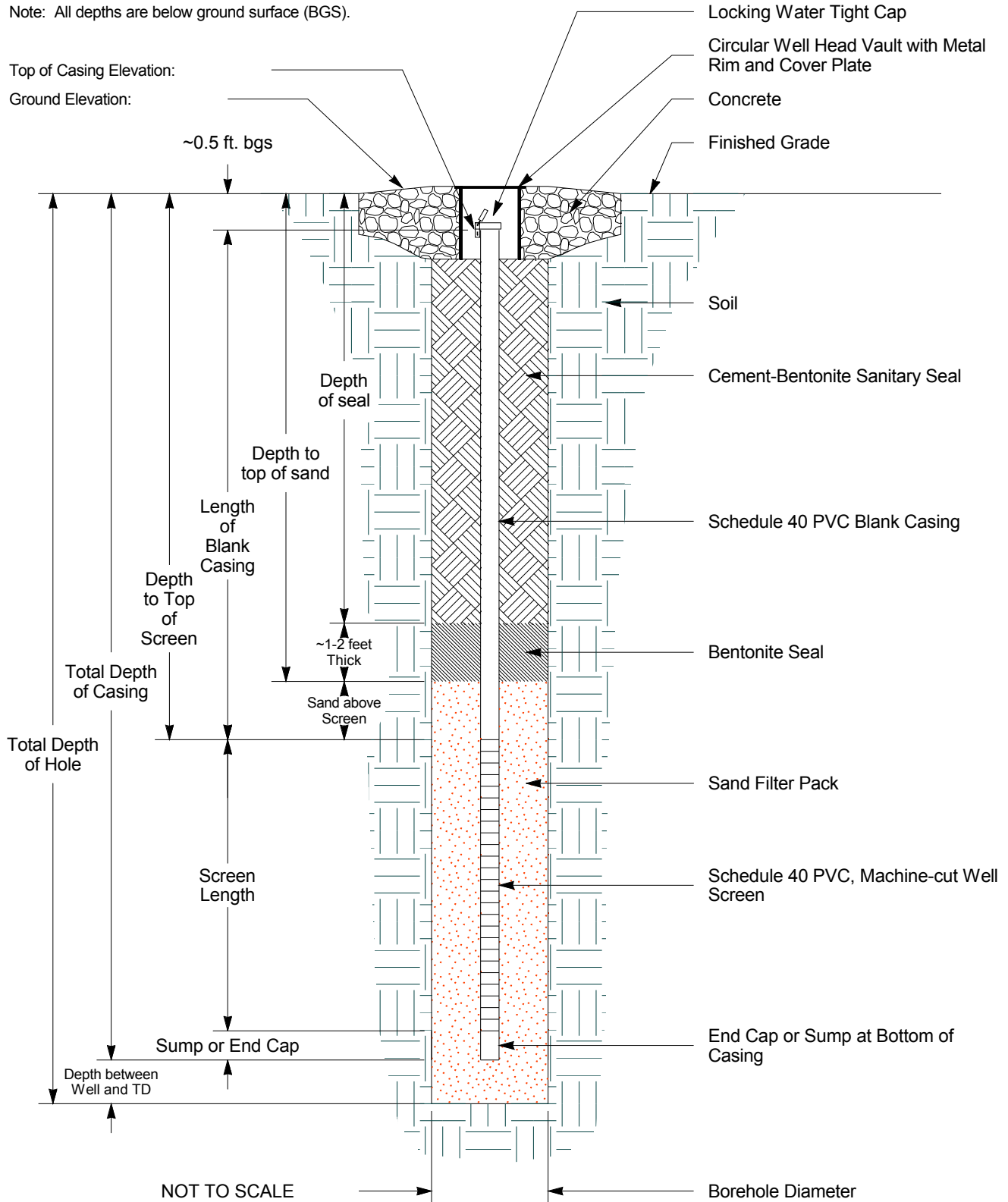
1" = 60'

FIGURE NO.:

Note: All depths are below ground surface (BGS).

Top of Casing Elevation:

Ground Elevation:



NOT TO SCALE

SCS ENGINEERS

Environmental Consultants
3645 Westwind Boulevard
Santa Rosa, California 95403
Ph.: 707-546-9461 Fax: 707-544-5769

WELL COMPLETION DIAGRAM

John Riddell
4660 Hessel Road
Sebastopol, California 95472
Job Number: 01203317.00

FIGURE:

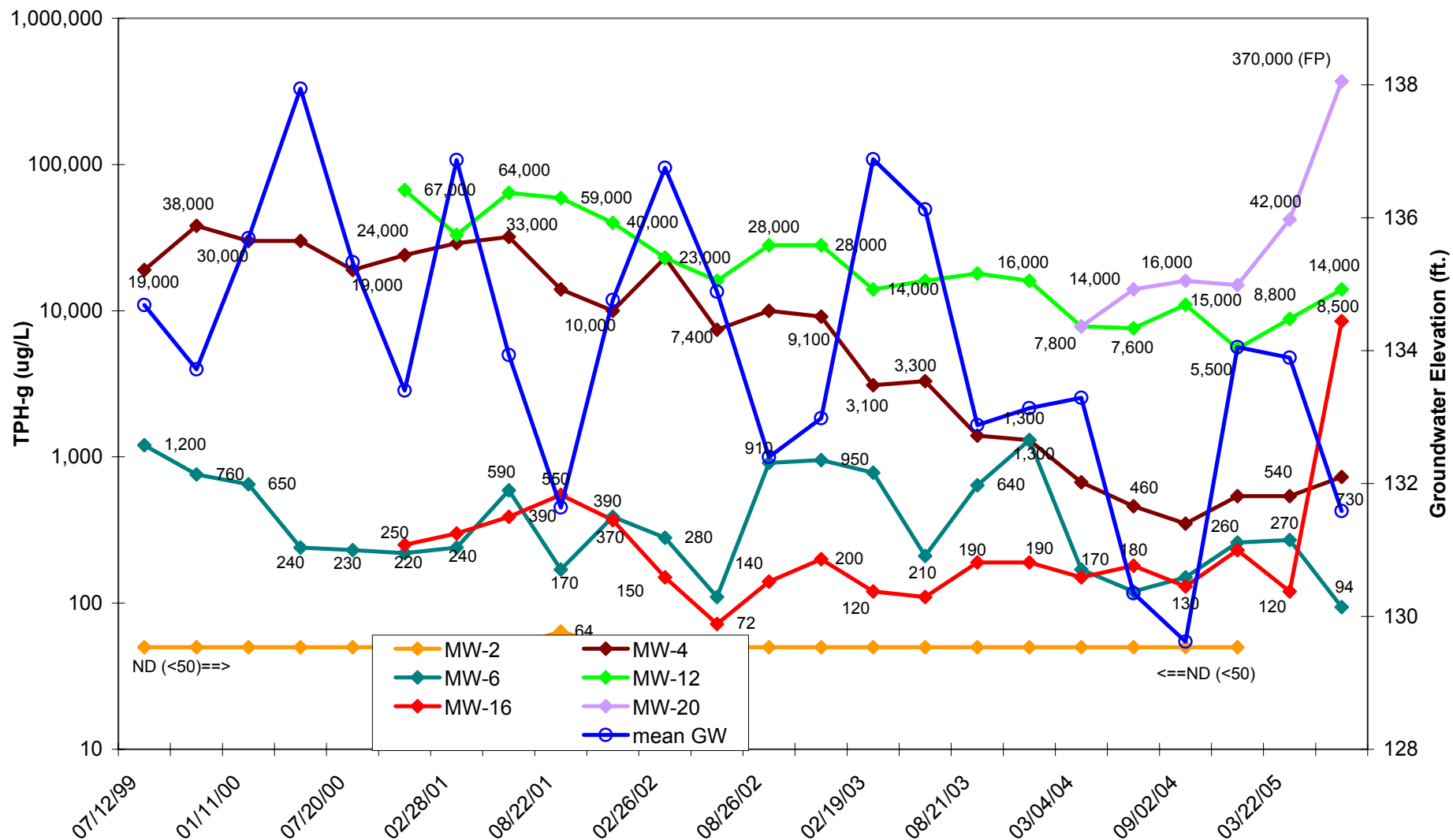
W

Key to Diagrams and Tables
4660 Hessel Road, Sebastopol

TPH-g	=	Total petroleum hydrocarbons in the gasoline range
TPH-d	=	Total petroleum hydrocarbons in the diesel range
TPH-mo	=	Total petroleum hydrocarbons in the motor oil range
TPH-k	=	Total petroleum hydrocarbons in the kerosene range
B	=	Benzene
T	=	Toluene
E	=	Ethylbenzene
X	=	Xylenes
MTBE	=	Methyl tertiary butyl ether
DIPE	=	Diisopropyl ether
ETBE	=	Ethyl tertiary butyl ether
TAME	=	Tertiary amyl methyl ether
TBA	=	Tert-butyl alcohol
Five Oxys	=	Five ether-based oxygenates (MTBE, DIPE, ETBE, TAME, TBA)
EDC	=	Ethylene dichloride ²
EDB	=	Ethylene dibromide ³
Pb Scavs	=	Lead scavengers (EDC, EDB)
VOCs	=	Volatile Organic Compounds
μg/L	=	Micrograms per liter
RDL	=	Report detection limit
ND	=	Below the laboratory report detection limit
NA	=	Not analyzed
msl	=	Mean sea level
INF	=	Influent
EFF	=	Effluent

² EDC has been referred to as 1,2-dichloroethane (1,2-DCA) in previous reports.

³ EDB has been referred to as 1,2-dibromoethane in previous reports.



Confirmation sample collected from MW-16 on December 30, 2002, as the sample collected on November 20, 2002 was actually collected from MW-15D but was mislabeled as MW-16.
 MW-2 has been placed on a semi-annual sampling program effective the 1st quarter 2005.

SCS ENGINEERS

3645 WESTWIND BOULEVARD
 SANTA ROSA, CALIFORNIA

Drawn By: KLC

File Name: TPH-g-GW

TPH-g & GROUNDWATER ELEVATION vs TIME - Shallow Wells

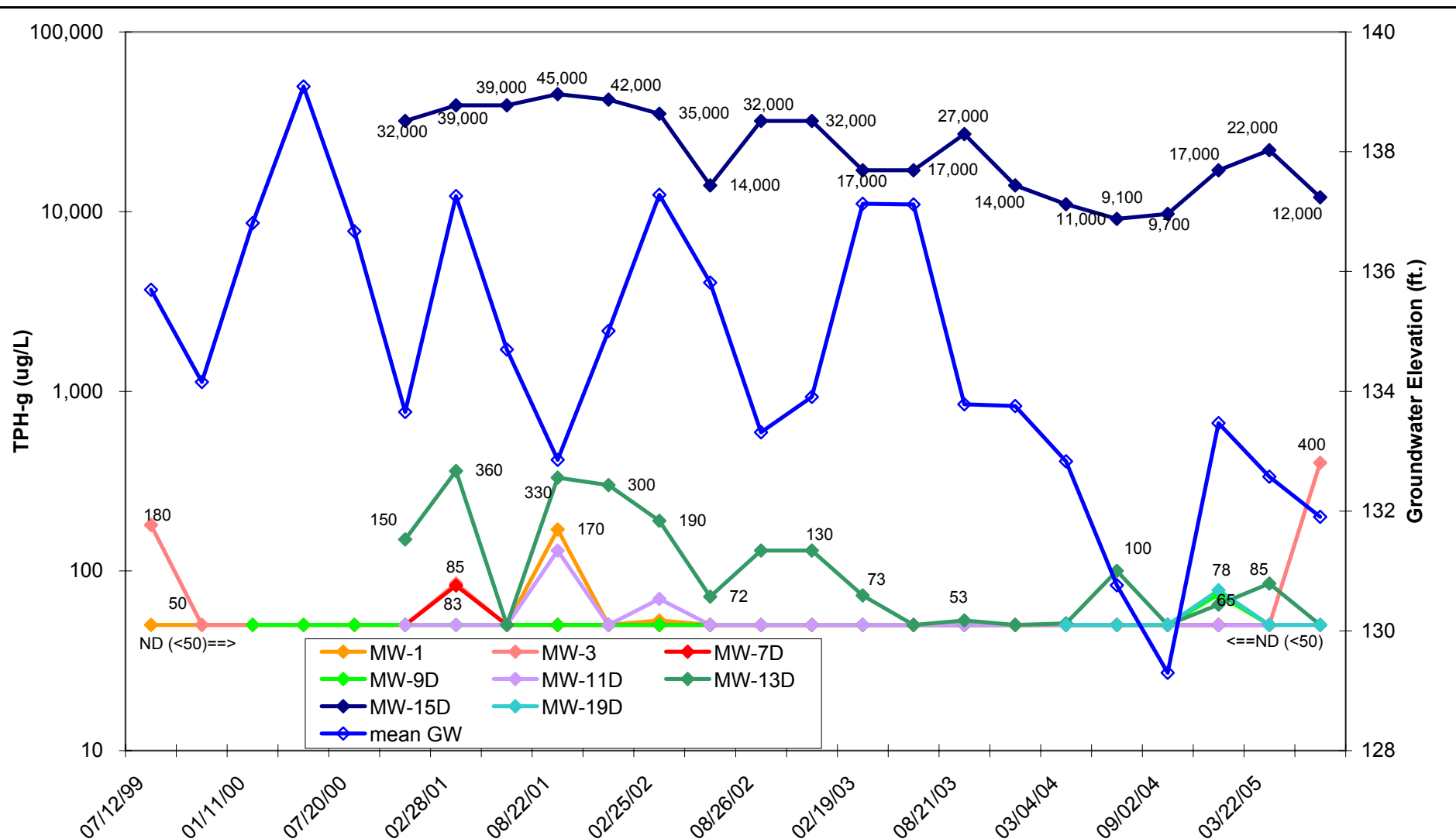
John Riddell
 4660 Hessel Road, Sebastopol, California

Job Number: 01203317.00

DIAGRAM

A

DATE: 08/04/05



Confirmation sample collected from MW-16 on December 30, 2002, as the sample collected on November 20, 2002 was actually collected from MW-15D but was mislabeled as MW-16.
MW-1 has been placed on a semi-annual sampling program, effective the 1st quarter 2005.

SCS ENGINEERS

3645 WESTWIND BOULEVARD
SANTA ROSA, CALIFORNIA

Drawn By: KLC

File Name: TPH-g-GW

TPH-g & GROUNDWATER ELEVATION vs TIME - Deep Wells

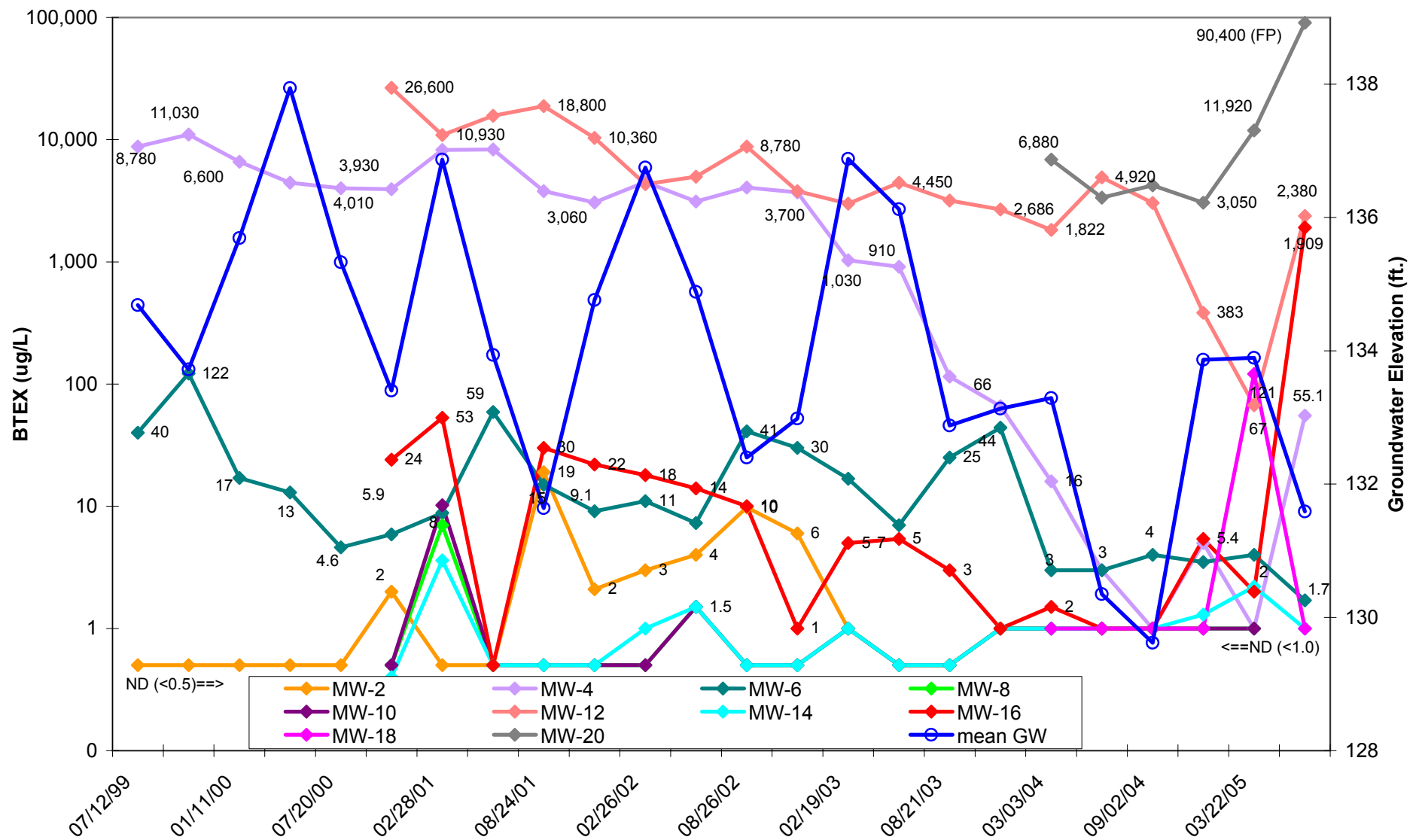
John Riddell
4660 Hessel Road, Sebastopol, California

Job Number: 01203317.00

DIAGRAM

B

DATE: 08/04/05



SCS ENGINEERS

SBTEX & GROUNDWATER ELEVATION vs TIME - Shallow Wells

DIAGRAM

3645 WESTWIND BOULEVARD
SANTA ROSA, CALIFORNIA

John Riddell
4660 Hessel Road, Sebastopol, California

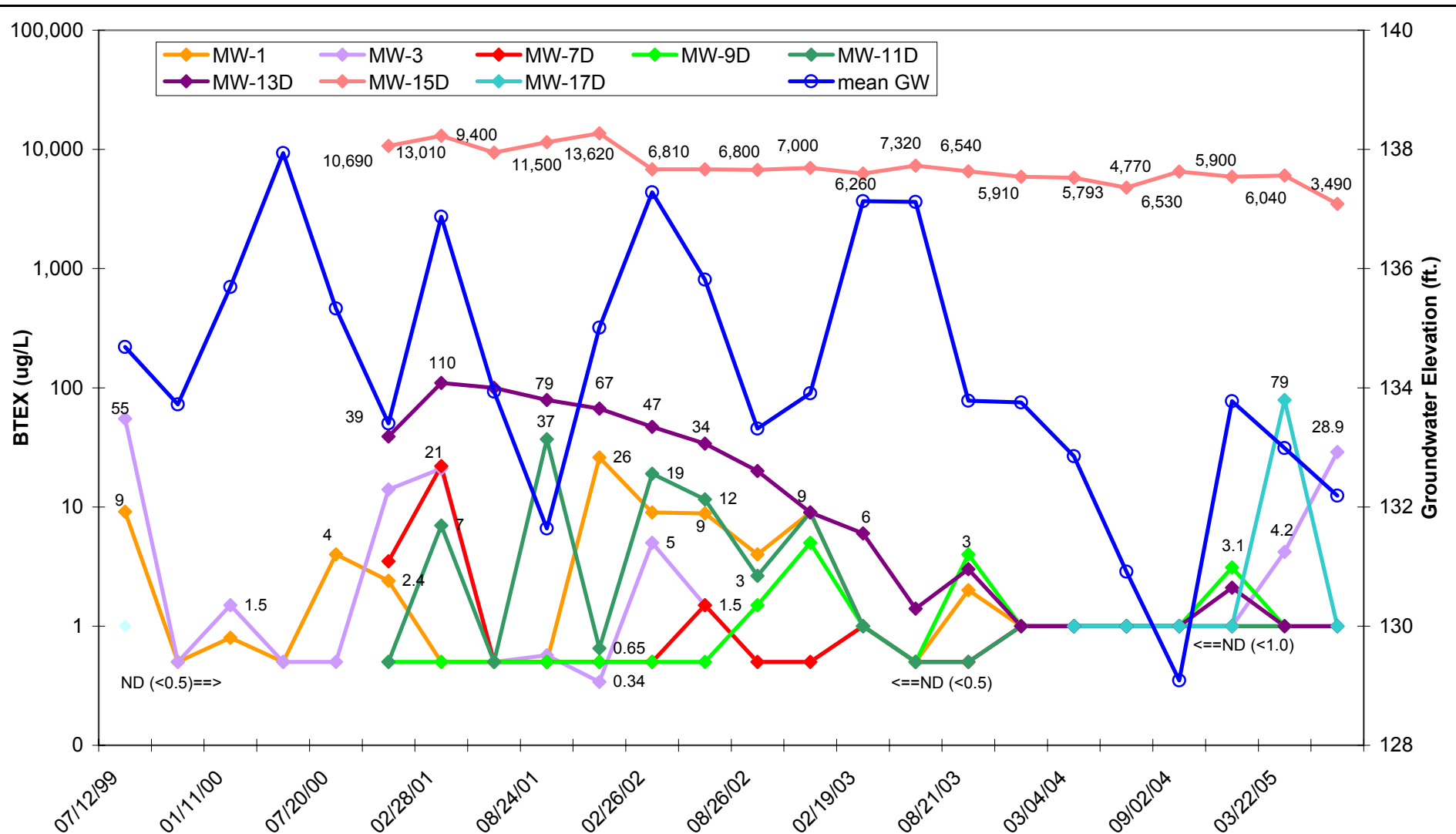
C

Drawn By: KLC

File Name: BTEX-GW

Job Number: 01203317.00

DATE: 08/04/05



Confirmation sample collected from MW-16 on December 30, 2002, as the sample collected on November 20, 2002 was actually collected from MW-15D but was mislabeled as MW-16.

SCS ENGINEERS

3645 WESTWIND BOULEVARD
SANTA ROSA, CALIFORNIA

Drawn By: KLC

File Name: BTEX-GW

SBTEX & GROUNDWATER ELEVATION vs TIME - Deep Wells

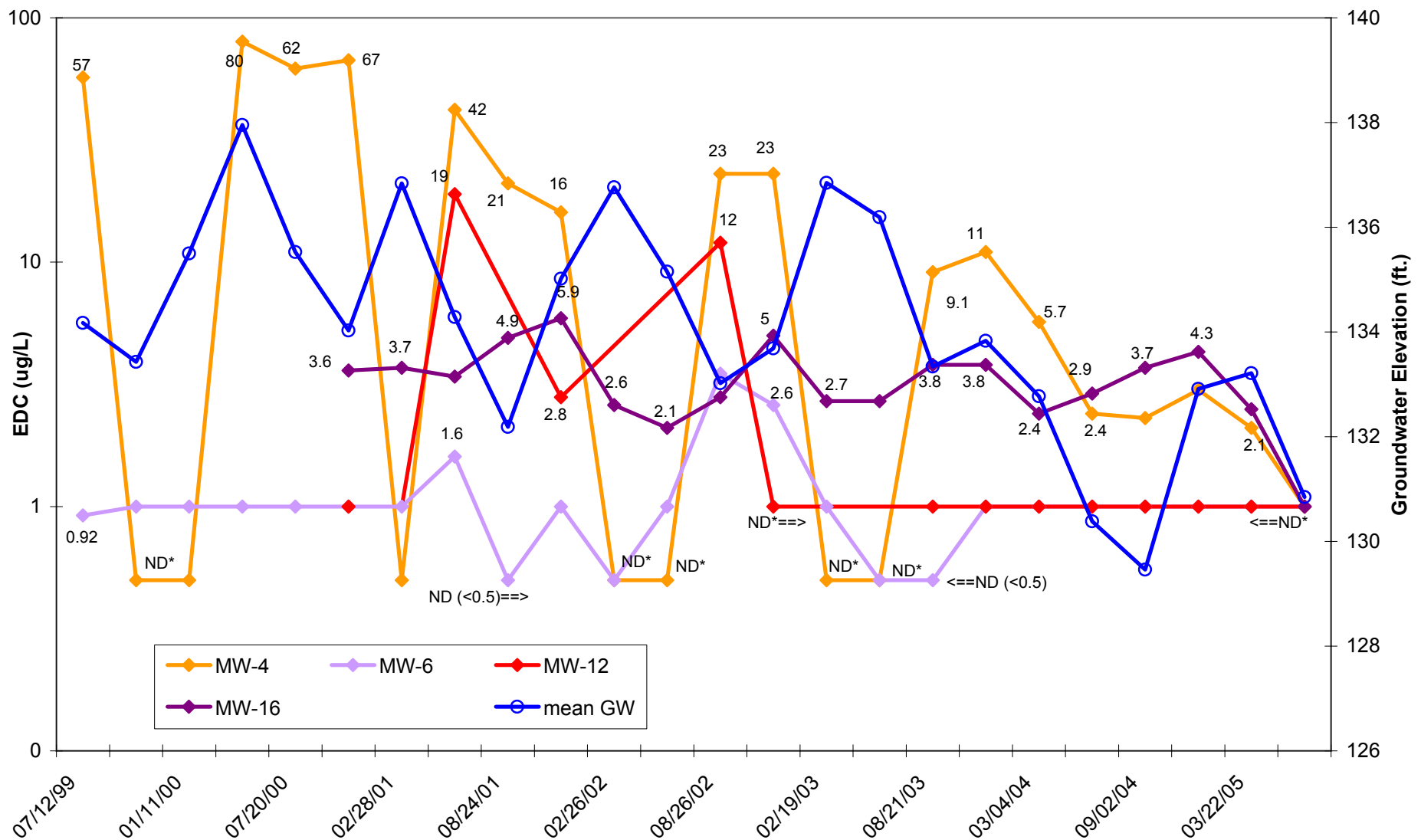
John Riddell
4660 Hessel Road, Sebastopol, California

Job Number: 01203317.00

DIAGRAM

D

DATE: 04/13/05



SCS ENGINEERS

EDC & GROUNDWATER ELEVATION vs TIME - Shallow Wells

DIAGRAM

3645 WESTWIND BOULEVARD
SANTA ROSA, CALIFORNIA

John Riddell
4660 Hessel Road, Sebastopol, California

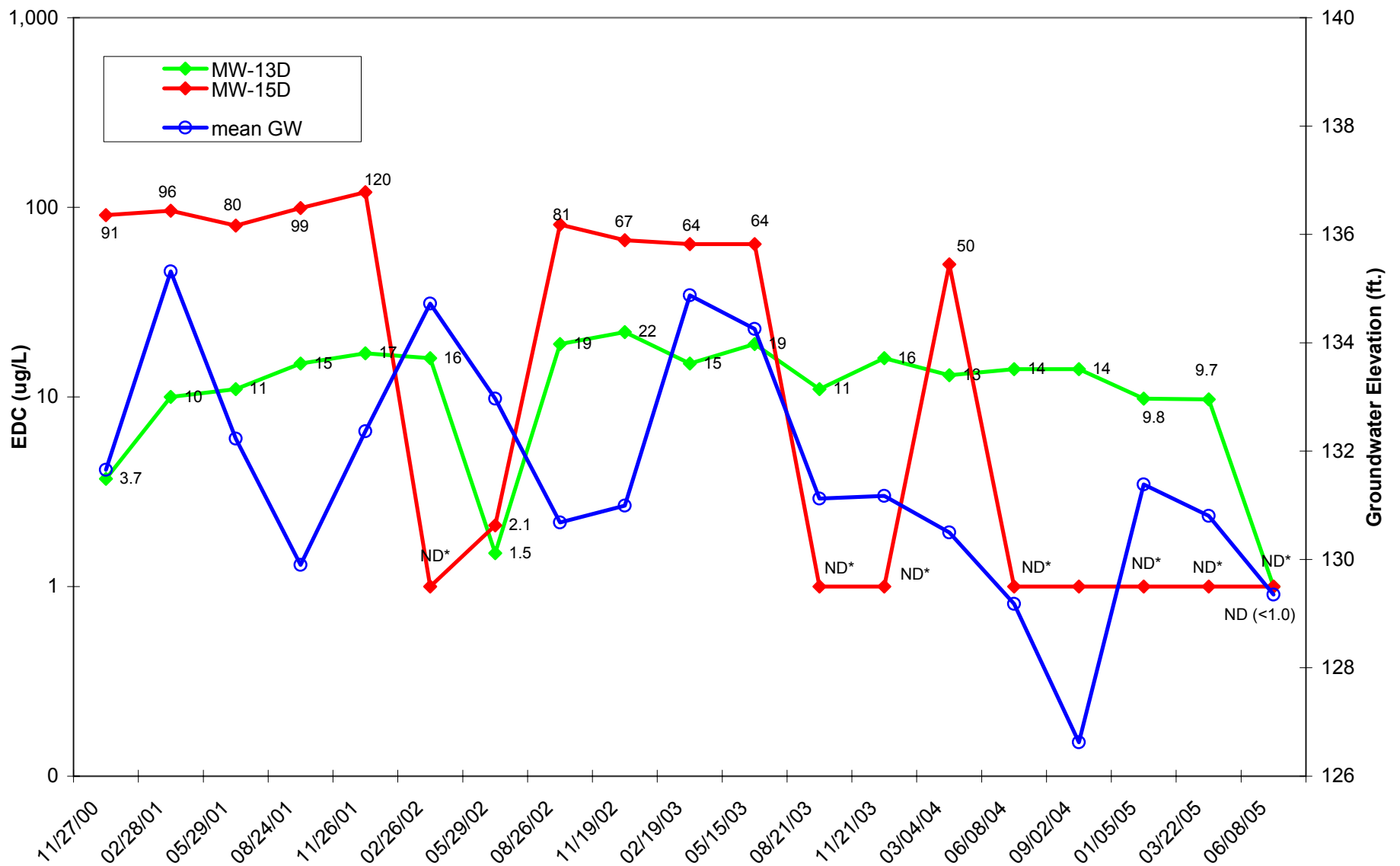
E

Drawn By: KLC

File Name: EDC-GW

Job Number: 01203317.00

DATE: 08/04/05



Note: ND* indicates one or samples with elevated detection limit.

SCS ENGINEERS

3645 WESTWIND BOULEVARD
SANTA ROSA, CALIFORNIA

Drawn By: KLC

File Name: EDC-GW

EDC & GROUNDWATER ELEVATION vs TIME - Deep Wells

John Riddell
4660 Hessel Road, Sebastopol, California

Job Number: 01203317.00

DIAGRAM

F

DATE: 08/04/05

**Table 1: Partial Analytical Results from Shallow Sampling Activities - Soil
4660 Hessel Road, Sebastopol**

Sample ID	Date	Depth	TPH-g	B	T	E	X
		-----mg/kg-----					
B-1	12/05/94	1.5	23	ND	ND	ND	ND
B-1	12/05/94	5.0	ND	ND	ND	ND	ND
B-2	12/05/94	1.5	ND	ND	ND	ND	ND
B-2	12/05/94	4.5	ND	ND	ND	0.0016	0.0092
B-3	03/07/95	2.5	ND	ND	ND	ND	ND
B-4	03/07/95	2.5	ND	ND	ND	ND	ND
B-5	03/07/95	2.5	ND	ND	ND	ND	ND
B-6	03/07/95	2.5	ND	ND	ND	ND	ND
B-7	03/07/95	2.5	ND	ND	ND	ND	ND
B-8	03/08/95	2.5	ND	ND	ND	ND	ND
B-11	03/07/95	2.0	ND	ND	ND	ND	ND
B-12	03/07/95	2.5	ND	ND	ND	ND	ND
B-16	03/08/95	1.5	ND	ND	ND	ND	ND
B-17	03/08/95	2.0	ND	ND	ND	ND	ND
B-18	03/08/95	2.5	ND	ND	ND	ND	ND
B-19	03/08/95	2.5	ND	ND	ND	ND	ND
B-20	03/08/95	2.0	ND	ND	ND	ND	ND
HTP-1	01/17/95	2.0	ND	ND	ND	ND	ND
TR-1	01/17/95	1.5	2,200	5.2	18	23	120
TR-3	01/17/95	2.5	7.3	0.0097	0.098	0.15	0.68
TR-5	01/17/95	3.0	7,300	25	22	86	430

**Table 2: Partial Analytical Results from Shallow Sampling Activities - Water
4660 Hessel Road, Sebastopol**

Sample ID	Date	TPH-g	B	T	E	X
		ug/L				
B-3	03/07/95	690	90	24	2.6	10
B-4	03/07/95	ND	ND	2.8	0.77	2.5
B-5	03/07/95	ND	ND	ND	ND	ND
B-6	03/07/95	ND	ND	ND	ND	ND
B-7	03/07/95	ND	ND	ND	ND	ND
B-8	03/08/95	50	1.1	3.2	0.8	3.1
B-9	03/08/95	ND	ND	ND	ND	ND
B-11	03/07/95	ND	ND	ND	ND	ND
B-12	03/07/95	ND	ND	ND	ND	ND
B-13	03/07/95	ND	1.1	0.72	ND	ND
B-14	03/07/95	ND	ND	ND	ND	0.65
B-15	03/07/95	ND	ND	ND	ND	ND
B-16	03/08/95	ND	ND	ND	ND	ND
B-17	03/08/95	ND	ND	ND	ND	ND
B-18	03/08/95	ND	ND	ND	ND	ND
B-19	03/08/95	ND	ND	ND	ND	ND
B-20	03/08/95	ND	ND	ND	ND	ND
B-21	03/08/95	ND	ND	ND	ND	ND
B-22	03/08/95	ND	ND	ND	ND	ND
B-23	03/08/95	ND	ND	ND	ND	ND
B-24	03/08/95	ND	ND	ND	ND	ND
B-25	03/08/95	ND	ND	ND	ND	ND
B-26	03/08/95	ND	ND	ND	ND	ND
TP2-W	01/17/95	55,000	2,800	21,000	1,500	8,900
HW-1	01/17/95	ND	ND	ND	ND	ND
HW-2	01/17/95	ND	ND	ND	ND	ND
HW-3	01/17/95	ND	ND	ND	ND	ND
HW-4	01/17/95	ND	ND	ND	ND	ND

Table 3: Soil Sample Analytical Results from Deep Drilling Program - 1997
4660 Hessel Road, Sebastopol

Sample ID	Date	TPH-g	B	T	E	X	MTBE	TPH-d	TPH-mo
-----mg/kg-----									
B-101-4.5	02/24/97	150	<0.10	0.15	0.12	0.97	<1.0	NA	NA
B-101-9.5		520	8.5	99	37	250	<20	NA	NA
B-101-13		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-101-14.5		<1.0	<0.005	<0.005	<0.005	0.029	<1.0	NA	NA
B-101-17		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-101-19.5		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-101-24		<1.0	<0.005	0.006	<0.005	0.0083	<1.0	NA	NA
B-102-4.5		180	<0.020	0.37	0.53	2.5	<1.0	NA	NA
B-102-9		<1.0	<0.020	<0.005	<0.005	<0.020	<1.0	NA	NA
B-102-13		<1.0	0.037	0.016	0.022	0.059	<1.0	NA	NA
B-102-19		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-103-4.5		550	<0.40	2.9	4.9	37	<20	NA	NA
B-103-9		920	<0.20	2.1	5.5	38	<10	NA	NA
B-103-13		74	0.54	1.4	1.1	6.7	<1.0	NA	NA
B-103-15		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-103-19		<1.0	<0.020	0.046	0.033	0.16	<1.0	NA	NA
B-103-23		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-104-4.5	02/25/97	<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-104-9		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-104-12		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-104-14.5		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-104-19		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-104-24.5		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-105-4.5		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-105-9.5		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-105-14.5		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-105-19.5		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-105-21		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-105-24.5		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-105-25.5		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-106-4.5		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-106-9.5		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-106-15		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-106-19.5		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-106-24.5		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA

Table 3: Soil Sample Analytical Results from Deep Drilling Program - 1997
4660 Hessel Road, Sebastopol

Sample ID	Date	TPH-g	B	T	E	X	MTBE	TPH-d	TPH-mo
-----mg/kg-----									
B-107-4.5	02/26/97	<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-107-9.5		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-107-14.5		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-107-17		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-107-19.5		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-107-24		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-107-27		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-107-30		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-107-34.5		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-108-4.5		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-108-9.5		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-108-14		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-108-19.5		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-108-24		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-109-4.5		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-109-9.5		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-109-12.5		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-109-19		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	NA	NA
B-109-24		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	<1.0	<50
B-109-28		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	<1.0	<50

**Table 4A: Analytical Results from Gas Pipeline Trench Sampling - Gas/BTEX/MTBE
4660 Hessel Road, Sebastopol**

Sample ID	Date	TPH-g	B	T	E	X	MTBE
		-----mg/kg-----					
4660-PH-1-2.5'	11/24/98	<1.0	<0.005	<0.005	<0.005	<0.005	<1.0
4660-PH-2-2.5'	11/24/98	<1.0	<0.005	<0.005	<0.005	<0.005	<1.0
4660-PH-3-1.5'	11/24/98	<1.0	<0.005	<0.005	<0.005	<0.005	<1.0
4660-PH-4-3.5'	11/24/98	<1.0	<0.005	<0.005	<0.005	<0.005	<1.0
4660-PH-5-4'	11/24/98	<1.0	<0.005	<0.005	<0.005	<0.005	<1.0
4660-PH-6-4'	11/24/98	<1.0	<0.005	<0.005	<0.005	<0.005	<1.0
4660-PH-7-3.5'	11/24/98	<1.0	<0.005	<0.005	<0.005	<0.005	<1.0
4660-PH-8-3.5'	11/24/98	<1.0	<0.005	<0.005	<0.005	<0.005	<1.0
4660-PH-9-3.2'	11/24/98	<1.0	<0.005	<0.005	<0.005	<0.005	<1.0
4660-PH-10-3.8'	11/24/98	<1.0	<0.005	<0.005	<0.005	<0.005	<1.0
4660-PH-11-3.5'	11/24/98	<1.0	<0.005	<0.005	<0.005	<0.005	<1.0
4660-PH-12-4'	11/24/98	<1.0	<0.005	<0.005	<0.005	<0.005	<1.0
4660-PH-13-4'	11/24/98	2,400	<0.005	7.7	12	110	<1.0
4660-PH-14-4'	11/24/98	4,000	<0.005	49	45	330	<1.0

**Table 4B: Analytical Results from Gas Pipeline Trench Sampling - Diesel/Motor Oil
4660 Hessel Road, Sebastopol**

Sample ID	Date	TPH-d	TPH-mo
		-----mg/kg-----	
4660-PH-1-2.5'	11/24/98	1.2	4.4
4660-PH-2-2.5'	11/24/98	<1.0	2.5
4660-PH-3-1.5'	11/24/98	<1.0	NA
4660-PH-4-3.5'	11/24/98	1.7	NA
4660-PH-5-4'	11/24/98	<1.0	NA
4660-PH-6-4'	11/24/98	2.3	NA
4660-PH-7-3.5'	11/24/98	<1.0	NA
4660-PH-8-3.5'	11/24/98	<1.0	NA
4660-PH-9-3.2'	11/24/98	1.1	NA
4660-PH-10-3.8'	11/24/98	<1.0	NA
4660-PH-11-3.5'	11/24/98	<1.0	NA
4660-PH-12-4'	11/24/98	<1.0	NA
4660-PH-13-4'	11/24/98	1,100	NA
4660-PH-14-4'	11/24/98	1,300	NA

**Table 5: Soil Sample Analytical Results from Monitoring Wells
4660 Hessel Road, Sebastopol**

Sample ID	Date	TPH-g	TPH-d	TPH-mo	B	T	E	X	MTBE
		-----mg/kg-----							
MW-1-5	06/29/99	<1.0	<1.0	<2.0	<0.005	<0.005	<0.005	<0.005	<1.0
MW-1-10	06/29/99	<1.0	<1.0	<2.0	<0.005	<0.005	<0.005	<0.005	<1.0
MW-1-15'	06/29/99	<1.0	<1.0	<2.0	<0.005	<0.005	<0.005	<0.005	<1.0
MW-1-20	06/29/99	<1.0	<1.0	<2.0	<0.005	<0.005	<0.005	<0.005	<1.0
MW-3-5	06/29/99	<1.0	<1.0	<2.0	<0.005	<0.005	<0.005	<0.005	<1.0
MW-3-10	06/29/99	<1.0	2.1	<2.0	<0.005	<0.005	0.009	0.034	<1.0
MW-3-15	06/29/99	<1.0	<1.0	<2.0	<0.005	<0.005	<0.005	<0.005	<1.0
MW-5-5	06/29/99	<1.0	<1.0	<2.0	<0.005	<0.005	<0.005	<0.005	<1.0
MW-5-10	06/29/99	<1.0	<1.0	<2.0	<0.005	<0.005	<0.005	<0.005	<1.0
MW-5-15'	06/29/99	<1.0	<1.0	5.0	<0.005	<0.005	<0.005	0.0051	<1.0
MW-8-10'	10/12/00	<1.0	<1.0	<2.0	<0.005	<0.005	<0.005	<0.005	<1.0
MW-8-14'	10/12/00	<1.0	<1.0	<2.0	<0.005	<0.005	<0.005	<0.005	<1.0
MW-10-10.5'	10/11/00	<1.0	<1.0	<2.0	<0.005	<0.005	<0.005	<0.005	<1.0
MW-10-14'	10/11/00	<1.0	3.7	<2.0	<0.005	<0.005	<0.005	<0.005	<1.0
MW-12-9'	10/12/00	<1.0	<1.0	<2.0	<0.005	<0.005	<0.005	<0.005	<1.0
MW-12-12'	10/12/00	<1.0	<1.0	<2.0	<0.005	<0.005	<0.005	<0.005	<1.0
MW-12-14'	10/12/00	<1.0	<1.0	<2.0	<0.005	<0.005	0.023	0.06	<1.0
MW-14-10'	10/11/00	<1.0	<1.0	<2.0	<0.005	<0.005	<0.005	<0.005	<1.0
MW-14-12.5'	10/11/00	<1.0	<1.0	<2.0	<0.005	<0.005	<0.005	<0.005	<1.0
MW-14-13.5'	10/11/00	<1.0	<1.0	<2.0	<0.005	<0.005	<0.005	<0.005	<1.0
MW-16-5'	10/25/00	<1.0	<1.0	<2.0	<0.005	<0.005	<0.005	<0.005	<1.0
MW-16-10'	10/25/00	3.4	<1.0	<2.0	<0.005	<0.005	<0.005	<0.005	<1.0
MW-16-15.5'	10/25/00	5.2	2.7	3.2	<0.005	<0.005	<0.005	<0.005	<1.0

**Table 6: Soil Sample Analytical Results from 1999 Borings
4660 Hessel Road, Sebastopol**

Sample ID	Date	TPH-g	TPH-d	TPH-mo	B	T	E	X	MTBE
		-----mg/kg-----							
B-110-5	06/29/99	<1.0	<1.0	<2.0	<0.005	<0.005	<0.005	<0.005	<1.0
B-110-10	06/29/99	<1.0	<1.0	<2.0	0.0082	<0.005	0.0092	0.027	<1.0
B-110-15'	06/29/99	<1.0	<1.0	<2.0	<0.005	<0.005	<0.005	<0.005	<1.0
B-111-5	06/29/99	<1.0	<1.0	<2.0	<0.005	<0.005	<0.005	0.029	<1.0
B-111-10	06/29/99	<1.0	<1.0	<2.0	<0.005	<0.005	<0.005	<0.005	<1.0
B-112-5	06/30/99	<1.0	<1.0	<2.0	<0.005	<0.005	<0.005	<0.005	<1.0
B-112-10	06/30/99	26	1.6	<2.0	0.58	0.13	0.43	2.0	<1.0
B-112-15	06/30/99	<1.0	<1.0	<2.0	<0.005	<0.005	<0.005	<0.005	<1.0
B-113-5	07/01/99	<1.0	<1.0	<2.0	<0.005	<0.005	<0.005	<0.005	<1.0
B-113-10	07/01/99	450	130	<5.0	<0.30	1.2	2.7	11	<3.0
B-113-13.5'	07/01/99	5.3	2.4	<2.0	<0.030	0.03	<0.030	0.12	<1.0
B-114-5	07/01/99	230	2,200	<5.0	<0.30	3.6	10	74	<3.0
B-114-10'	07/01/99	1,700	450	<10	<0.60	16	14	87	<5.0
B-114-13	07/01/99	1,700	2,200	100	<0.30	8.9	7.2	47	<3.0
B-114-15	07/01/99	3.0	1.2	<2.0	<0.005	<0.005	<0.005	<0.005	<1.0

Table 7: Soil Analytical Results from 2001 Borings
4660 Hessel Road, Sebastopol, California

Sample ID	Date	TPH-g	TPH-d	B	T	E	X	MTBE
		-----mg/kg-----						
B-201-4'	08/23/01	930	690	13	33	38	140	<5.0
B-201-8'	08/23/01	1,100	490	13	52	36	130	<5.0
B-203-4'	08/23/01	430	240	1.5	3.6	8.1	22	<5.0
B-203-7.5'	08/23/01	820	180	13	37	32	110	<5.0
B-204-4'	08/23/01	1.1	<10	0.031	0.046	0.066	0.38	<0.025
B-204-8'	08/23/01	NA	<10	NA	NA	NA	NA	NA
B-205-4'	08/23/01	<50	50	<0.50	<0.50	0.76	3.1	<2.5
B-205-8'	08/23/01	8.0	NA	0.075	0.14	0.22	0.78	<0.025
B-206-4'	08/23/01	NA	300	NA	NA	NA	NA	NA
B-206-8'	08/23/01	NA	190	NA	NA	NA	NA	NA
B-207-4'	08/23/01	NA	<10	NA	NA	NA	NA	NA
B-207-8'	08/23/01	NA	<10	NA	NA	NA	NA	NA
B-208-4'	08/23/01	NA	<10	NA	NA	NA	NA	NA
B-208-8'	08/23/01	NA	<10	NA	NA	NA	NA	NA
B-209-4'	08/23/01	NA	<10	NA	NA	NA	NA	NA
B-209-8'	08/23/01	NA	<10	NA	NA	NA	NA	NA
B-210-4'	08/23/01	<1.0	<10	<0.005	0.006	0.047	0.053	<0.025
B-210-8'	08/23/01	<1.0	<10	0.011	<0.005	<0.005	<0.015	<0.025
B-211-4'	08/23/01	NA	920	NA	NA	NA	NA	NA
B-211-8'	08/23/01	NA	27	NA	NA	NA	NA	NA
B-212-4'	08/23/01	<1.0	<10	<0.005	<0.005	<0.005	0.02	<0.025
B-212-8'	08/23/01	<1.0	<10	<0.005	0.008	0.012	0.03	<0.025
B-213-4'	08/23/01	<1.0	NA	<0.005	<0.005	<0.005	<0.015	<0.025
B-213-8'	08/23/01	6.8	NA	0.51	0.62	0.2	0.81	<0.025
B-214-5'	08/24/01	<1.0	NA	<0.005	<0.005	<0.005	<0.015	<0.025
B-214-8'	08/24/01	6.4	50	0.22	0.4	0.22	1.2	<0.025
B-215-6'	08/24/01	NA	120	NA	NA	NA	NA	NA
B-215-9'	08/24/01	NA	700	NA	NA	NA	NA	NA
B-216-6'	08/24/01	1.1	<10	0.21	0.22	0.049	0.2	<0.025
B-216-9'	08/24/01	840	<10	16	43	20	73	<2.5
B-216-11.5'	08/24/01	NA	1,400	NA	NA	NA	NA	NA
B-217-6'	08/24/01	1,110	590	14	45	35	140	<5.0
B-218-6'	08/24/01	<1.0	NA	0.34	<0.005	<0.005	<0.015	<0.025
B-218-9'	08/24/01	10	NA	3.2	2.1	1.4	2.9	<0.50
B-219-9'	08/24/01	NA	920	NA	NA	NA	NA	NA
B-220-7'	08/24/01	NA	<10	NA	NA	NA	NA	NA
B-220-9'	08/24/01	100	NA	1.8	3.9	3.1	11	<2.5
B-221-9'	08/24/01	1,300	310	20	18	23	82	<5.0
B-222-9'	08/24/01	NA	<10	NA	NA	NA	NA	NA
B-223-9'	08/24/01	15	NA	1.9	0.9	4.7	7.4	<0.50
B-223-11.5'	08/24/01	NA	<10	NA	NA	NA	NA	NA
B-224-9'	08/24/01	<1.0	NA	<0.005	<0.005	<0.005	<0.015	<0.025
B-225-11.5'	08/24/01	400	110	11	33	17	70	<5.0
B-226-9'	08/24/01	4.1	NA	0.51	0.35	0.13	0.37	<0.50

**Table 8: Soil Analytical Results from 2001 Excavation
4660 Hessel Road, Sebastopol, California**

Sample ID	Date	TPH-g	TPH-d	B	T	E	X	MTBE
		-----mg/kg-----						
S-1-(11')	10/09/01	<1.0	<5.0	<0.005	<0.005	<0.005	<0.015	<0.025
S-2-(11')	10/09/01	<1.0	<5.0	<0.005	<0.005	<0.005	<0.015	<0.025
S-3-(11')	10/09/01	<1.0	<5.0	0.012	<0.005	<0.005	<0.015	<0.025
S-4-(11')	10/09/01	7.7	<5.0	0.046	0.18	0.09	0.3	<0.050
S-5-(11')	10/09/01	5.0	<5.0	0.33	0.43	0.11	0.46	<0.025
S-6-(11')	10/09/01	1.6	<5.0	0.21	0.11	0.02	0.11	<0.025
S-7-(11')	10/09/01	1.8	<5.0	0.13	0.077	<0.005	<0.015	<0.025
S-8-11'	10/10/01	16	<5.0	0.15	0.31	0.24	0.63	<0.025
S-9-11'	10/10/01	<1.0	<5.0	0.015	0.018	0.006	0.02	<0.025
S-10-11'	10/10/01	<1.0	<5.0	0.033	0.005	0.043	0.076	<0.025
S-11-11'	10/11/01	100	43	0.38	1.0	0.83	3.1	<1.0
S-12-11'	10/12/01	<1.0	<5.0	0.017	0.014	<0.005	0.015	<0.025
S13-10'	10/16/01	<1.0	<5.0	0.006	<0.005	<0.005	<0.015	<0.025
S14-8'	10/16/01	<1.0	<5.0	0.005	<0.005	0.006	<0.015	<0.025
S15-9'	10/16/01	4.4	<5.0	0.4	0.21	0.12	0.28	<0.025
S16-3'	10/16/01	40	170	<0.005	0.058	0.22	0.58	<0.025
B-1-(13')	10/09/01	<1.0	<5.0	0.063	0.054	<0.005	<0.015	<0.025
B-2-(13')	10/09/01	<1.0	<5.0	0.2	0.12	<0.005	<0.015	<0.025
B-3-(13')	10/09/01	1.0	<5.0	0.092	0.16	0.017	0.087	<0.025
B-4-(13')	10/09/01	<1.0	<5.0	0.094	0.011	0.025	0.036	<0.025
B-5-(13')	10/09/01	1.3	<5.0	0.17	0.25	0.009	0.044	<0.025
B-6-13'	10/10/01	<1.0	<5.0	0.018	0.017	0.007	0.032	<0.025
B-7-13'	10/10/01	<1.0	<5.0	<0.005	<0.005	<0.005	<0.015	<0.025
B-8-13'	10/10/01	6.5	<5.0	1.1	0.93	0.15	0.74	<0.025
B-9-14'	10/11/01	<1.0	<5.0	0.022	0.006	0.005	0.015	<0.025
B-10-14'	10/11/01	2.1	<5.0	0.35	0.3	0.044	0.2	<0.025
B-11-13'	10/12/01	<1.0	<5.0	0.012	0.011	<0.005	0.019	<0.025
B12-16'	10/16/01	<1.0	<5.0	0.006	<0.005	<0.005	<0.015	<0.025
B13-9'	10/16/01	<1.0	<5.0	<0.005	<0.005	<0.005	<0.015	<0.025
EX-1	10/16/01	21	<5.0	0.2	0.27	0.17	0.82	<0.025

Table 9: Soil Boring Analytical Results - Monitoring Wells - 2004
4660 Hessel Road, Sebastopol

Sample ID	Date	TPH-g	Benzene	Toluene	Ethylbenzene	Xylenes	5-Oxys	n-propylbenzene*	1,3,5-trimethylbenzene*	1,2,4-trimethylbenzene*	n-butylbenzene*	naphthalene*
		-----mg/kg-----										
MW-18-5'	02/11/04	<1.0	<0.002	<0.002	<0.002	<0.002	<0.002 to <0.05	<0.002	<0.002	<0.002	<0.002	<0.002
MW-18-10'	02/11/04	<1.0	<0.002	<0.002	<0.002	0.035	<0.002 to <0.05	<0.002	<0.002	<0.002	<0.002	<0.002
MW-20-5'	02/12/04	550	<0.4	4.9	2.3	146	<0.4 to <10	1.1	3.2	9.5	1.0	1.8
MW-20-10'	02/12/04	52	<0.1	0.31	0.38	2.18	<0.1 to <1.0	0.2	0.52	1.6	0.14	0.4

* Component of gasoline.

All other VOCs are none detect

Table 10: Domestic Well Analytical Results
4660 Hessel Road, Sebastopol

[illegible]

Table 10: Domestic Well Analytical Results
4660 Hessel Road, Sebastopol

[illegible]

**Table 10: Domestic Well Analytical Results
4660 Hessel Road, Sebastopol**

ID	Date	TPH-g	TPH-d	TPH-mo	B	T	E	X	EDC	MTBE	Other VOCs
		ug/L									
DW-4615	08/26/02	NA	NA	NA	<0.3	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5
	02/19/03	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	05/15/03	NA	NA	NA	<0.3	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5
	08/21/03	<50	NA	NA	<0.3	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5
	11/21/03	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	03/02/04	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	06/07/04	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	09/02/04	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	01/04/05	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
DW-MB	02/19/03	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	09/02/04	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	01/04/05	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

* Confirmation sampling of January 11, 2000 contaminant hits.

Table 11: Soil Boring Analytical Results - 2005
4660 Hessel Road, Sebastopol

Sample ID	Date	TPH-g	Benzene	Toluene	Ethylbenzene	Xylenes	5-Oxys	EDC	isopropylbenzene	n-propylbenzene*	1,3,5-trimethylbenzene*	1,2,4-trimethylbenzene*	sec-butylbenzene	n-butylbenzene	naphthalene*
		-----mg/kg-----													
B-115-@13.0'	01/24/05	<1.0	0.067	<0.002	0.0049	<0.002	<0.002 to <0.05	0.003	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
B-115-@20.5'	01/24/05	<1.0	<0.002	<0.002	<0.002	<0.002	<0.002 to <0.05	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
B-116-@25.5'	01/25/05	<1.0	0.097	<0.002	0.011	<0.002	<0.002 to <0.05	0.0096	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
B-116-@35.5'	01/25/05	<1.0	<0.002	<0.002	<0.002	<0.002	<0.002 to <0.05	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
B-119@20.5'	01/26/05	1.0	0.21	0.0082	0.041	0.063	<0.002 to <0.05	0.002	<0.002	0.0035	0.0086	0.025	<0.002	<0.002	0.015
B-119@31.0'	01/26/05	<1.0	<0.002	<0.002	<0.002	<0.002	<0.002 to <0.05	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
B-120@16.0'	02/07/05	12	0.0076	<0.002	0.015	<0.002	<0.002 to <0.05	<0.002	<0.002	<0.002	0.0027	<0.002	<0.002	<0.002	0.0088
B-120@24'	02/07/05	<1.0	0.0032	<0.002	<0.002	<0.002	<0.002 to <0.05	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
B-120@25.5'	02/07/05	<1.0	<0.002	<0.002	<0.002	<0.002	<0.002 to <0.05	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
B-120@31.5'	02/07/05	<1.0	<0.002	<0.002	<0.002	<0.002	<0.002 to <0.05	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
B-120@36.0'	02/07/05	<1.0	<0.002	<0.002	<0.002	<0.002	<0.002 to <0.05	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
B-121@16.5	02/08/05	<1.0	<0.002	<0.002	<0.002	<0.002	<0.002 to <0.05	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
B-121@21.0	02/08/05	<1.0	0.007	<0.002	<0.002	<0.002	<0.002 to <0.05	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
B-121@26.0	02/08/05	<1.0	<0.002	<0.002	<0.002	<0.002	<0.002 to <0.05	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
B-122@10.5	02/09/05	1,700	7.3	52	19	109	<0.5 to <25	<0.005	1.3	6.7	17	62	0.71	5.0	9.9
B-122@16.0'	02/09/05	<1.0	0.054	0.08	0.028	0.16	<0.002 to <0.05	0.0052	<0.002	0.0092	0.023	0.082	<0.002	0.0073	0.0096
B-122@31.0'	02/09/05	<1.0	<0.002	0.004	0.0018	0.0098	<0.002 to <0.05	<0.002	<0.002	<0.002	0.0022	0.0078	<0.002	<0.002	<0.002

Table 12: Groundwater Boring Analytical Results - 2005
4660 Hessel Road, Sebastopol

Sample ID	Date	TPH-g	TPH-d	TPH-mo	B	T	E	X	MTBE	DIPE	ETBE	TAME	TBA	EDC	n-propyl benzene	1,3,5-trimethylbenzene	n-butylbenzene	1,2,4-trimethylbenzene	naphthalene
		ug/L																	
B-115-W@4.0'	01/24/05	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
B-115-W@21.5'	01/24/05	1,400	NA	NA	1,200	11	46	29	<10	<10	<10	<10	<250	63	<10	17	<10	12	<10
B-116-W@3.0'	01/24/05	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
B-116-W@20.0'	01/25/05	360	NA	NA	2.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	44	10	<1.0	2.0	<1.0	<1.0	<1.0
B-116-W@40.0'	01/25/05	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
B-117-W@3.0'	01/24/05	<50	NA	NA	<1.0	1.7	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
B-117-W@20.0'	01/25/05	130	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	4.8	<1.0	<1.0	<1.0	<1.0	<1.0
B-117-W@40.0'	01/25/05	110	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
B-118-W@3.0'	01/24/05	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
B-118-W@20.0'	01/26/05	230	NA	NA	<1.0	<1.0	2.3	<1.0	<1.0	<1.0	<1.0	<1.0	<25	4.3	<1.0	<1.0	<1.0	<1.0	<1.0
B-118-W@37.0'	01/26/05	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
B-119-W@3.0'	01/26/05	<50	NA	NA	<1.0	1.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
B-119-W@20.0'	01/26/05	3,300	NA	NA	1,100	30	170	110	<20	<20	<20	<20	<500	61	<1.0	23	<1.0	40	57
B-120-W@5.0'	02/07/05	100	NA	NA	25	1.3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	2.8	<1.0	<1.0	<1.0	<1.0	1.0
B-120-W@39.0'	02/07/05	210	NA	NA	24	1.3	5	1.8	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	1.2	1.8
B-121-W@5.0'	02/08/05	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
B-121-W@15.0'	02/08/05	350	NA	NA	1.3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	2.4	1.5	<1.0	<1.0	<1.0	<1.0
B-121-W@35.0'	02/08/05	<50	NA	NA	1.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
B-122-W@10.0'	02/09/05	58,000	81,000*	<10,000	6,900	20,000	2,000	11,900	<100	<100	<100	<100	<2,500	<100	290	810	<100	3,000	1,100
B-122-W@35.0'	02/09/05	670	NA	NA	2.8	31	10	61	<1.0	<1.0	<1.0	<1.0	<25	<1.0	3.9	10	2.7	38	6.9

* Floating product was present. The sample chromatogram does not exhibit a pattern characteristic of diesel. Higher boiling point constituents of gasoline are clearly present.

**Table 13: Groundwater Flow Direction and Gradient for Shallow Wells
4660 Hessel Road, Sebastopol**

Well #	Date	Top of Casing Elevation (feet > msl)	Depth to Groundwater (feet)	Water Level Elevation (feet > msl)	Groundwater Flow Direction & Gradient (i)
MW-2	07/12/99	140.03	4.32	135.71	N20°E i = 0.02
MW-4		137.78	3.88	133.91	
MW-6		140.00	5.56	134.44	
MW-2	10/20/99	140.03	5.73	134.30	N20°W i = 0.04
MW-4		137.78	5.38	132.40	
MW-6		140.00	5.54	134.46	
MW-2	01/11/00	140.03	3.96	136.07	N10°W i = 0.02
MW-4		137.78	2.69	135.09	
MW-6		140.00	4.09	135.91	
MW-2	04/18/00	140.03	2.12	137.91	N40°W i = 0.04
MW-4		137.78	0.68	137.10	
MW-6		140.00	1.19	138.81	
MW-2	07/20/00	140.03	5.09	134.94	N45°W i = 0.02
MW-4		137.78	2.98	134.80	
MW-6		140.00	3.75	136.25	
MW-2	11/27/00	140.03	5.47	134.56	NNE i = 0.025
MW-4		137.78	3.58	134.20	
MW-6		140.00	4.89	135.11	
MW-8		140.24	5.30	134.94	
MW-10		136.89	5.53	131.36	
MW-12		139.38	5.65	133.73	
MW-14		135.18	4.95	130.23	
MW-16		137.38	4.30	133.08	
MW-2	02/28/01	140.03	2.04	137.99	N20°W i = 0.02
MW-4		137.78	0.57	137.21	
MW-6		140.00	1.16	138.84	
MW-8		140.24	1.64	138.60	
MW-10		136.89	0.85	136.04	
MW-12		139.39	3.75	135.64	
MW-14		135.18	0.21	134.97	
MW-16		137.38	1.72	135.66	
MW-2	05/29/01	140.03	4.78	135.25	N10°W i = 0.03
MW-4		137.78	3.31	134.47	
MW-6		140.00	4.42	135.58	
MW-8		140.24	4.82	135.42	
MW-10		136.89	4.48	132.41	
MW-12		139.38	5.48	133.90	
MW-14		135.18	3.92	131.26	
MW-16		137.38	4.18	133.20	

**Table 13: Groundwater Flow Direction and Gradient for Shallow Wells
4660 Hessel Road, Sebastopol**

Well #	Date	Top of Casing Elevation (feet > msl)	Depth to Groundwater (feet)	Water Level Elevation (feet > msl)	Groundwater Flow Direction & Gradient (i)
MW-2	08/22/01	140.03	7.0	133.03	N10°W i = 0.02
MW-4		137.78	5.50	132.28	
MW-6		140.00	6.88	133.12	
MW-8		140.24	7.39	132.85	
MW-10		136.89	7.30	129.59	
MW-12		139.38	6.95	132.43	
MW-14		135.18	6.30	128.88	
MW-16		137.38	6.46	130.92	
MW-2	11/26/01	140.03	3.45	136.58	N10°W i = 0.02
MW-4		137.78	2.45	135.33	
MW-6		140.00	3.70	136.30	
MW-8		140.24	3.80	136.44	
MW-10		136.89	3.76	133.13	
MW-12		139.38	5.22	134.16	
MW-14		135.18	3.32	131.86	
MW-16		137.38	3.10	134.28	
MW-2	02/25/02	140.03	2.31	137.72	N20°W i = 0.03
MW-4		137.78	0.39	137.39	
MW-6		140.00	1.36	138.64	
MW-8		140.24	1.85	138.39	
MW-10		136.89	0.95	135.94	
MW-12		139.38	3.72	135.66	
MW-14		135.18	0.30	134.88	
MW-16		137.38	2.01	135.37	
MW-2	05/29/02	140.03	4.12	135.91	Northerly i = 0.02
MW-4		137.78	2.0	135.78	
MW-6		140.00	3.36	136.64	
MW-8		140.24	3.86	136.38	
MW-10		136.89	3.23	133.66	
MW-12		139.38	5.26	134.12	
MW-14		135.18	2.66	132.52	
MW-16		137.38	3.31	134.07	
MW-2	08/26/02	140.03	6.05	133.98	Northerly i = 0.01
MW-4		137.78	4.46	133.32	
MW-6		140.00	6.51	133.49	
MW-8		140.24	7.38	132.86	
MW-10		136.89	6.34	130.55	
MW-12		139.38	6.0	133.38	
MW-14		135.18	5.47	129.71	
MW-16		137.38	5.49	131.89	

**Table 13: Groundwater Flow Direction and Gradient for Shallow Wells
4660 Hessel Road, Sebastopol**

Well #	Date	Top of Casing Elevation (feet > msl)	Depth to Groundwater (feet)	Water Level Elevation (feet > msl)	Groundwater Flow Direction & Gradient (i)
MW-2	11/19/02	140.03	5.35	134.68	N to NE i = 0.02
MW-4		137.78	3.78	134.00	
MW-6		140.00	5.75	134.25	
MW-8		140.24	6.48	133.76	
MW-10		136.89	5.92	130.97	
MW-12		139.38	5.50	133.88	
MW-14		135.18	5.46	129.72	
MW-16		137.38	4.77	132.61	
MW-2	02/18/03	140.03	2.03	138.00	Apparent N-NE Gradient not calculated
MW-4		137.78	0.40	137.38	
MW-6		140.00	1.31	138.69	
MW-8		140.24	1.78	138.46	
MW-10		136.89	0.80	136.09	
MW-12		139.38	3.65	135.73	
MW-14		135.18	0.10	135.08	
MW-16		137.38	1.79	135.59	
MW-2	05/14/03	140.03	2.82	137.21	Northerly i = 0.02
MW-4		137.78	0.98	136.80	
MW-6		140.00	2.04	137.96	
MW-8		140.24	2.53	137.71	
MW-10		136.89	1.74	135.15	
MW-12		139.38	4.31	135.07	
MW-14		135.18	1.02	134.16	
MW-16		137.38	2.45	134.93	
MW-2	08/20/03	140.03	5.41	134.62	Northeasterly i = 0.01
MW-4		137.78	4.05	133.73	
MW-6		140.00	5.98	134.02	
MW-8		140.24	6.77	133.47	
MW-10		136.89	5.77	131.12	
MW-12		139.38	5.82	133.56	
MW-14		135.18	4.72	130.46	
MW-16		137.38	5.33	132.05	
MW-2	11/20/03	140.03	5.33	134.70	Northeasterly i = 0.02
MW-4		137.78	3.47	134.31	
MW-6		140.00	5.45	134.55	
MW-8		140.24	6.13	134.11	
MW-10		136.89	5.90	130.99	
MW-12		139.38	5.58	133.80	
MW-14		135.18	5.25	129.93	
MW-16		137.38	4.71	132.67	

**Table 13: Groundwater Flow Direction and Gradient for Shallow Wells
4660 Hessel Road, Sebastopol**

Well #	Date	Top of Casing Elevation (feet > msl)	Depth to Groundwater (feet)	Water Level Elevation (feet > msl)	Groundwater Flow Direction & Gradient (i)
MW-2	03/02/04*	135.97	2.56	133.41	Northerly i = 0.03
MW-4		133.74	0.10	133.64	
MW-6		135.97	1.60	134.37	
MW-8		136.20	1.57	134.63	
MW-10		132.85	1.0	131.85	
MW-12		135.32	3.79	131.53	
MW-14		131.15	Artesian conditions		
MW-16		133.33	1.78	131.55	
MW-18		137.95	1.0	136.95	
MW-20		136.93	1.59	135.34	
Stand Pipe		135.11	5.20**	129.91	
Bridge		132.97	7.72	125.25	
* Previously existing wells were re-surveyed and MW-18 and MW-20 were surveyed on February 26 and March 4, 2004.					
** Measurement collected on March 12, 2004.					
MW-2	06/07/04	135.97	4.14	131.83	Northerly i = 0.03
MW-4		133.74	2.88	130.86	
MW-6		135.97	4.39	131.58	
MW-8		136.20	5.05	131.15	
MW-10		132.85	4.34	128.51	
MW-12		135.32	5.43	129.89	
MW-14		131.15	3.58	127.57	
MW-16		133.33	4.12	129.21	
MW-18		137.95	4.24	133.71	
MW-20		136.93	4.38	132.55	
Stand Pipe		135.11	6.14	128.97	
Bridge		132.97	7.84	125.13	
MW-2		09/02/04	135.97	2.87	
MW-4	133.74		3.97	129.77	
MW-6	135.97		5.61	130.36	
MW-8	136.20		6.32	129.88	
MW-10	132.85		5.99	126.86	
MW-12	135.32		5.35	129.97	
MW-14	131.15		4.86	126.29	
MW-16	133.33		5.58	127.75	
MW-18	137.95		4.47	133.48	
MW-20	136.93		4.33	132.60	
Stand Pipe	135.11		6.62	128.49	
Bridge	132.97		7.88	125.09	

**Table 13: Groundwater Flow Direction and Gradient for Shallow Wells
4660 Hessel Road, Sebastopol**

Well #	Date	Top of Casing Elevation (feet > msl)	Depth to Groundwater (feet)	Water Level Elevation (feet > msl)	Groundwater Flow Direction & Gradient (i)
MW-2	01/04/05	135.97	1.33	134.64	N-NW i = 0.05
MW-4		133.74	Artesian conditions		
MW-6		135.97	0.56	135.41	
MW-8		136.20	1.15	135.05	
MW-10		132.85	0.39	132.46	
MW-12		135.32	4.11	131.21	
MW-14		131.15	Artesian conditions		
MW-16		133.33	1.21	132.12	
MW-18		137.95	0.47	137.48	
MW-20		136.93	0.76	136.17	
Stand Pipe		135.11	NM		
Bridge		132.97	NM		
MW-2	03/22/05	135.97	0.59	135.38	NW i = 0.04
MW-4		133.74	0.03	133.71	
MW-6		135.97	0.86	135.11	
MW-8		136.20	0.94	135.26	
MW-10		132.85	0.39	132.46	
MW-12		135.32	3.33	131.99	
MW-14		131.15	Artesian conditions		
MW-16		133.33	1.29	132.04	
MW-18		137.95	Artesian conditions		
MW-20		136.93	0.85	136.08	
Stand Pipe		135.11	3.87	131.24	
Bridge		132.97	NM		
MW-2	06/08/05	135.97	3.10	132.87	NNW i = 0.04
MW-4		133.74	3.75	129.99	
MW-6		135.97	2.70	133.27	
MW-8		136.20	3.10	133.10	
MW-10		132.85	2.46	130.39	
MW-12		135.32	5.10	130.22	
MW-14		131.15	1.96	129.19	
MW-16		133.33	3.42	129.91	
MW-18		137.95	2.61	135.34	
MW-20		136.93	2.57	134.36	
Stand Pipe		135.11	5.81	131.24	
Bridge		132.97	NM		

**Table 14: Groundwater Flow Direction and Gradient for Deep Wells
4660 Hessel Road, Sebastopol**

Well #	Date	Top of Casing Elevation (feet > msl)	Depth to Groundwater (feet)	Water Level Elevation (feet > msl)	Groundwater Flow Direction & Gradient (i)
MW-1	07/12/99	139.76	2.26	137.50	N85°E i = 0.02
MW-3		137.79	2.41	135.38	
MW-5		139.40	5.20	134.20	
MW-1	10/20/99	139.76	3.13	136.63	N75°E i = 0.03
MW-3		137.79	4.26	133.53	
MW-5		139.40	7.10	132.30	
MW-1	01/11/00	139.76	2.0	137.76	N15°E i = 0.02
MW-3		137.79	1.97	135.82	
MW-5		139.40	2.56	136.84	
MW-1	04/18/00	139.76	0.41	139.35	Not calculated
MW-3		137.79	Artesian conditions encountered		
MW-5		139.40	0.57	138.83	
MW-1	07/20/00	139.76	2.59	137.17	N5°E i = 0.01
MW-3		137.79	1.63	136.16	
MW-5		139.40	2.72	136.68	
MW-1	11/27/00	139.75	3.49	136.26	N35°E i = 0.025
MW-3		137.79	2.29	135.50	
MW-5		139.40	3.62	135.78	
MW-7D		140.14	4.32	135.82	
MW-9D		136.92	7.13	129.29	
MW-11D		139.41	2.74	136.67	
MW-13D		135.30	6.84	128.46	
MW-15D		137.22	5.78	131.44	
MW-1	02/28/01	139.75	0.56	139.19	N5°E i = 0.02
MW-3		137.79	Artesian conditions		
MW-5		139.40	0.17	139.23	
MW-7D		140.14	0.79	139.35	
MW-9D		136.92	2.91	134.01	
MW-11D		139.41	0.04	139.37	
MW-13D		135.30	0.59	134.71	
MW-15D		137.22	2.26	134.96	
MW-1	05/29/01	139.75	2.65	137.10	North i = 0.05
MW-3		137.79	1.70	136.09	
MW-5		139.40	2.86	136.54	
MW-7D		140.14	3.53	136.61	
MW-9D		136.92	4.80	132.12	
MW-11D		139.41	1.96	137.45	
MW-13D		135.30	5.87	129.43	
MW-15D		137.22	4.99	132.23	

**Table 14: Groundwater Flow Direction and Gradient for Deep Wells
4660 Hessel Road, Sebastopol**

Well #	Date	Top of Casing Elevation (feet > msl)	Depth to Groundwater (feet)	Water Level Elevation (feet > msl)	Groundwater Flow Direction & Gradient (i)
MW-1	08/22/01	139.75	4.75	135.00	N5°E i = 0.04
MW-3		137.79	3.82	133.97	
MW-5		139.40	5.07	134.33	
MW-7D		140.14	5.73	134.41	
MW-9D		136.92	6.78	130.14	
MW-11D		139.41	4.08	135.33	
MW-13D		135.30	5.99	129.31	
MW-15D		137.22	6.88	130.34	
MW-1	11/26/01	139.75	2.80	136.95	North i = 0.03
MW-3		137.79	1.92	135.87	
MW-5		139.40	3.40	136.00	
MW-7D		140.14	4.10	136.04	
MW-9D		136.92	3.71	133.21	
MW-11D		139.41	2.13	137.28	
MW-13D		135.30	3.49	131.81	
MW-15D		137.22	4.30	132.92	
MW-1	02/25/02	139.75	0.68	139.07	N35°E i = 0.03
MW-3		137.79	Artesian conditions		
MW-5		139.40	0.60	138.80	
MW-7D		140.14	1.16	138.98	
MW-9D		136.92	1.55	135.37	
MW-11D		139.41	0.12	139.29	
MW-13D		135.30	0.57	134.73	
MW-15D		137.22	2.50	134.72	
MW-1	05/29/02	139.75	1.91	137.84	N to NE i = 0.02
MW-3		137.79	1.20	136.59	
MW-5		139.40	2.36	137.04	
MW-7D		140.14	3.0	137.14	
MW-9D		136.92	3.14	133.78	
MW-11D		139.41	1.23	138.18	
MW-13D		135.30	2.65	132.65	
MW-15D		137.22	3.93	133.29	
MW-1	08/26/02	139.75	4.25	135.50	N to NE i = 0.02
MW-3		137.79	3.45	134.34	
MW-5		139.40	4.96	134.44	
MW-7D		140.14	5.59	134.55	
MW-9D		136.92	6.41	130.51	
MW-11D		139.41	3.60	135.81	
MW-13D		135.30	5.10	130.20	
MW-15D		137.22	6.05	131.17	

**Table 14: Groundwater Flow Direction and Gradient for Deep Wells
4660 Hessel Road, Sebastopol**

Well #	Date	Top of Casing Elevation (feet > msl)	Depth to Groundwater (feet)	Water Level Elevation (feet > msl)	Groundwater Flow Direction & Gradient (i)
MW-1	11/19/02	139.75	4.08	135.67	N to NE i = 0.02
MW-3		137.79	2.93	134.86	
MW-5		139.40	4.36	135.04	
MW-7D		140.14	4.99	135.15	
MW-9D		136.92	4.81	132.11	
MW-11D		139.41	2.97	136.44	
MW-13D		135.30	4.96	130.34	
MW-15D		137.22	5.57	131.65	
MW-1	02/18/03	139.75	1.03	138.72	Apparent N-NE Gradient not calculated
MW-3		137.79	Artesian conditions encountered		
MW-5		139.40	0.07	139.33	
MW-7D		140.14	1.24	138.90	
MW-9D		136.92	2.92	134.00	
MW-11D		139.41	0.20	139.21	
MW-13D		135.30	0.50	134.80	
MW-15D		137.22	2.27	134.95	
MW-1	05/14/03	139.75	1.19	138.56	N-NE i = 0.02
MW-3		137.79	0.15	137.64	
MW-5		139.40	1.08	138.32	
MW-7D		140.14	1.66	138.48	
MW-9D		136.92	0.50	136.42	
MW-11D		139.41	0.38	139.03	
MW-13D		135.30	1.15	134.15	
MW-15D		137.22	2.86	134.36	
MW-1	08/20/03	139.75	3.90	135.85	N-NE i = 0.02
MW-3		137.79	2.99	134.80	
MW-5		139.40	4.42	134.98	
MW-7D		140.14	5.03	135.11	
MW-9D		136.92	5.93	130.99	
MW-11D		139.41	3.14	136.27	
MW-13D		135.30	4.60	130.70	
MW-15D		137.22	5.67	131.55	
MW-1	11/20/03	139.75	3.93	135.82	N-NE i = 0.02
MW-3		137.79	2.77	135.02	
MW-5		139.40	4.15	135.25	
MW-7D		140.14	4.78	135.36	
MW-9D		136.92	6.98	129.94	
MW-11D		139.41	3.13	136.28	
MW-13D		135.30	4.81	130.49	
MW-15D		137.22	5.36	131.86	

**Table 14: Groundwater Flow Direction and Gradient for Deep Wells
4660 Hessel Road, Sebastopol**

Well #	Date	Top of Casing Elevation (feet > msl)	Depth to Groundwater (feet)	Water Level Elevation (feet > msl)	Groundwater Flow Direction & Gradient (i)
MW-1	3/2/2004*	135.69	1.00	134.69	Northerly i = 0.04
MW-3		133.75	1.65	132.10	
MW-5		135.36	0.30	135.06	
MW-7D		136.08	1.40	134.68	
MW-9D		132.88	4.40	128.48	
MW-11D		135.35	1.05	134.30	
MW-13D		131.28	Artesian conditions		
MW-15D		133.19	2.69	130.50	
MW-17D		137.84	1.60	136.24	
MW-19D		137.05	1.10	135.95	
* Previously existing wells were re-surveyed and new wells were surveyed to msl on February 26 and March 4, 2004					
MW-1	06/07/04	135.69	2.79	132.90	N-NE i = 0.04
MW-3		133.75	2.01	131.74	
MW-5		135.36	3.24	132.12	
MW-7D		136.08	3.85	132.23	
MW-9D		132.88	7.67	125.21	
MW-11D		135.35	2.18	133.17	
MW-13D		131.28	3.42	127.86	
MW-15D		133.19	4.55	128.64	
MW-17D		137.84	4.26	133.58	
MW-19D		137.05	3.73	133.32	
MW-1		09/02/04	135.69	4.24	
MW-3	133.75		2.98	130.77	
MW-5	135.36		4.20	131.16	
MW-7D	136.08		4.78	131.30	
MW-9D	132.88		11.58	121.30	
MW-11D	135.35		3.49	131.86	
MW-13D	131.28		5.21	126.07	
MW-15D	133.19		6.01	127.18	
MW-17D	137.84		4.16	133.68	
MW-19D	137.05		4.07	132.98	

**Table 14: Groundwater Flow Direction and Gradient for Deep Wells
4660 Hessel Road, Sebastopol**

Well #	Date	Top of Casing Elevation (feet > msl)	Depth to Groundwater (feet)	Water Level Elevation (feet > msl)	Groundwater Flow Direction & Gradient (i)
MW-1	01/04/05	135.69	0.76	134.93	Northerly i = 0.03
MW-3		133.75	Artesian conditions		
MW-5		135.36	0.11	135.25	
MW-7D		136.08	1.00	135.08	
MW-9D		132.88	3.93	128.95	
MW-11D		135.35	0.31	135.04	
MW-13D		131.28	0.52	130.76	
MW-15D		133.19	1.18	132.01	
MW-17D		137.84	1.57	136.27	
MW-19D		137.05	1.34	135.71	
MW-1	03/22/05	135.69	1.39	134.30	N-NW i = 0.02
MW-3		133.75	Artesian conditions		
MW-5		135.36	0.86	134.50	
MW-7D		136.08	2.20	133.88	
MW-9D		132.88	7.12	125.76	
MW-11D		135.35	1.03	134.32	
MW-13D		131.28	0.20	131.08	
MW-15D		133.19	2.66	130.53	
MW-17D		137.84	1.14	136.70	
MW-19D		137.05	2.01	135.04	
MW-1	06/08/05	135.69	1.70	133.99	Northerly i = 0.03
MW-3		133.75	1.00	132.75	
MW-5		135.36	2.03	133.33	
MW-7D		136.08	2.83	133.25	
MW-9D		132.88	7.16	125.72	
MW-11D		135.35	0.45	134.90	
MW-13D		131.28	2.87	128.41	
MW-15D		133.19	2.90	130.29	
MW-17D		137.84	3.07	134.77	
MW-19D		137.05	2.57	134.48	

Table 15: Monitoring Well Analytical Results
4660 Hessel Road, Sebastopol

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Table 15: Monitoring Well Analytical Results
4660 Hessel Road, Sebastopol

[illegible]

**Table 15: Monitoring Well Analytical Results
4660 Hessel Road, Sebastopol**

ID	Date	TPH-g	TPH-d	TPH-mo	B	T	E	X	EDC	MTBE	DIPE	ETBE	TAME	TBA	n-butylbenzene	sec-butylbenzene	Methyl ethyl ketone	Styrene	isopropylbenzene	p-isopropyltoluene	naphthalene	n-propylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Chloroform	
		ug/L																								
MW-3	07/12/99	180	<50	<100	25	3.8	5.9	20	0.58	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	10/20/99	<50	<50	<100	0.32	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	01/11/00	<50	<50	<100	0.90	0.61	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	04/18/00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	07/20/00	<50	<50	<200	<0.5	<0.5	<0.5	<1.5	<2.0	<2.0	<2.0	<2.0	<2.0	<50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	11/27/00	<50	<50	<100	3.1	4.5	1.4	4.8	<0.5	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	02/28/01	85	79	<100	4.0	9.0	1.6	6.4	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	05/29/01	<50	<50	<100	<0.3	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	08/24/01	<50	<50	<100	0.57	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	11/26/01	<50	<50	<100	0.34	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	02/26/02	<50	<50	<100	2.6	0.45	0.66	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	05/30/02	<50	<50	<200	<0.5	<0.5	<0.5	<1.5	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	08/27/02	<50	NA	NA	<0.3	<0.3	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	11/20/02	<50	NA	NA	0.4	<0.3	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	02/19/03	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
	05/14/03	<50	NA	NA	<0.3	<0.3	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	08/20/03	<50	NA	NA	<0.3	<0.3	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	11/21/03	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	19	1.2	<1.0	<1.0	7.5	<1.0	8.6	<1.0	42	1.4	<1.0	
	03/03/04	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
	06/07/04	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
	09/02/04	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
	01/04/05	<50	NA	NA	1.0	<1.0	<1.0	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
	03/22/05	<50	NA	NA	1.0	<1.0	<1.0	4.2	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.5	<1.0	<1.0	
	06/08/05	400	NA	NA	<1.0	9.6	2.8	16.5	1.7	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	6.2	1.6	<1.0	

Table 15: Monitoring Well Analytical Results
4660 Hessel Road, Sebastopol

ID	Date	TPH-g	TPH-d	TPH-mo	B	T	E	X	EDC	MTBE	DIPE	ETBE	TAME	TBA	n-butylbenzene	sec-butylbenzene	Methyl ethyl ketone	Styrene	isopropylbenzene	p-isopropyltoluene	naphthalene	n-propylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Chloroform
		ug/L																							
MW-4	07/12/99	19000	3000	<100	4000	680	990	3200	57	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/20/99	38000	1200	<100	6100	330	1300	3100	<10	<10	<10	<10	<10	<200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	01/11/00	30000	1200	<100	4100	350	550	1600	<0.5	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	04/18/00	30000	3300 ¹	ND	6600	750	1000	2700	80	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	07/20/00	19000	3,200 ¹	<200	4700	890	920	2200	62	<2.0	<2.0	<2.0	<2.0	<50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/27/00	24000	2,000 ¹	<100	6700	330	1200	2400	67	<10	<10	<10	<10	<200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	02/28/01	29000	3900	330	4200	410	830	2800	<50	<50	<50	<50	<50	<500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	05/29/01	32000	1,400 ¹	<110	4200	490	920	2700	42	<5.0	<5.0	<5.0	<5.0	<100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/24/01	14000	530 ¹	<110	2500	150	540	640	21	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/26/01	10000	410 ¹	<100	2100	70	90	800	16	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	02/26/02	23000	1,100 ¹	<100	3200	<150	440	860	<250	<250	<250	<250	<250	<5,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	05/30/02	7400	1,000 ¹	<200	2400	40	390	290	<50	<50	<50	<50	<50	<1,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/27/02	10000	NA	NA	3500	6.6	540	9.8	23	<0.5	NA	NA	NA	NA	8.8	4.3	<1.0	<0.5	21	2.4	11	51	100	1.2	<0.5
	11/19/02	9100	NA	NA	3300	9.2	380	26	23	<0.5	NA	NA	NA	NA	6.3	2.8	<1.0	<0.5	18	1.4	13	45	46	2.1	<0.5
	02/19/03	3100	NA	NA	910	<25	120	<25	<25	<25	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	29	<1.0	<1.0	<1.0
	05/15/03	3300	NA	NA	800	<15	110	<25	<25	<25	NA	NA	NA	NA	<25	<25	<50	<25	<25	<25	<25	36	<25	<25	<25
	08/21/03	1400	NA	NA	35	<3.0	80	<5.0	9.1	<5.0	NA	NA	NA	NA	<5.0	<5.0	<10	<5.0	9.7	<5.0	<5.0	27	<5.0	<5.0	<5.0
	11/20/03	1300	NA	NA	85	2.3	36	19.2	11	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	03/03/04	670	NA	NA	8.1	<1.0	7.6	<1.0	5.7	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	4.4	<1.0	<1.0	11	<1.0	<1.0	<1.0
	06/08/04	460	NA	NA	1.6	<1.0	1.4	<1.0	2.4	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	2.5	<1.0	<1.0	5.9	<1.0	<1.0	<1.0
	09/02/04	350	NA	NA	1.3	<1.0	<1.0	<1.0	2.3	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	01/05/05	540	NA	NA	5.1	<1.0	<1.0	<1.0	3	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.7	<1.0	<1.0
	03/22/05	540	NA	NA	<1.0	<1.0	<1.0	<1.0	2.1	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	06/08/05	730	NA	NA	<1.0	6.4	5.7	43	<1.0	<1.0	<1.0	<1.0	<1.0	<25	6.0	<1.0	<1.0	<1.0	<1.0	<1.0	25	4.2	58	14	<1.0

¹ According to the laboratory report, results in the diesel organics range are primarily due to overlap from a gasoline range product.

Table 15: Monitoring Well Analytical Results
4660 Hessel Road, Sebastopol

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Table 15: Monitoring Well Analytical Results
4660 Hessel Road, Sebastopol

ID	Date	TPH-g	TPH-d	TPH-mo	B	T	E	X	EDC	MTBE	DIPE	ETBE	TAME	TBA	n-butylbenzene	sec-butylbenzene	Methyl ethyl ketone	Styrene	isopropylbenzene	p-isopropyltoluene	naphthalene	n-propylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Chloroform	
		ug/L																								
MW-6	07/12/99	<50	<50	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	10/20/99	<50	<50	<100	0.38	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	01/11/00	650	150	<100	6.7	<0.3	8.3	1.9	<0.5	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	04/18/00	240	200	ND	4.7	1.1	3.6	3.2	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	07/20/00	230	170 ¹	ND	1.4	<0.5	1.8	1.4	<2.0	<2.0	<2.0	<2.0	<2.0	<50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	11/27/00	220	59 ¹	<100	1.6	3.1	<0.5	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	02/28/01	240	120	<100	1.0	<0.3	4.9	2.9	<0.5	1.4	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	05/29/01	590	120 ¹	<100	36	<0.3	21	1.6	1.6	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	08/22/01	170	110 ¹	<100	9.0	<0.3	6.0	<0.5	<0.5	0.99	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	11/26/01	390	<50	<100	3.5	<0.3	5.6	<0.5	1	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	<0.5	<0.5	<0.5	
	02/25/02	280	95 ¹	<100	1.3	<0.3	7.5	2.6	<0.5	0.64	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	05/29/02	110	55 ¹	<200	1.5	0.88	3.3	1.6	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	08/26/02	910	NA	NA	8.6	<0.3	29	3.2	3.5	<0.5	NA	NA	NA	NA	<0.5	2.2	<1.0	<0.5	4.8	0.92	3.7	8.3	2.8	2.5	<0.5	
	11/19/02	950	NA	NA	8.8	0.38	19	1.6	2.6	<0.5	NA	NA	NA	NA	<0.5	1.7	1.3	<0.5	4.1	<0.5	4.5	5.3	1.2	0.62	<0.5	
	02/19/03	780	NA	NA	8.6	<1.0	5.7	2.5	<1.0	<1.0	NA	NA	NA	NA	<1.0	1.0	<1.0	<1.0	3.5	<1.0	8.8	2.4	3.5	2.2	<1.0	
	05/15/03	210	NA	NA	1.1	<0.3	4.4	1.5	<0.5	<0.5	NA	NA	NA	NA	0.9	2.0	2.1	<0.5	0.96	<0.5	2.4	1.7	2.5	1.7	<0.5	
	08/21/03	640	NA	NA	5.0	<0.3	17	3.4	<0.5	<0.5	NA	NA	NA	NA	1.2	0.81	<1.0	<0.5	2.4	<0.5	4.9	5.0	3.6	3.3	<0.5	
	11/20/03	1300	NA	NA	13	<1.0	27	3.9	<1.0	<1.0	<1.0	<1.0	<1.0	<25	11	2.1	<1.0	<1.0	9.7	<1.0	22	<1.0	5.1	7.8	<1.0	
	03/03/04	170	NA	NA	<1.0	<1.0	3.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.4	1.2	1.0	<1.0	
	06/08/04	120	NA	NA	<1.0	<1.0	2.8	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.7	1.0	<1.0	
	09/02/04	150	NA	NA	<1.0	<1.0	4.4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
	01/04/05	260	NA	NA	<1.0	<1.0	2.5	1.0	<1.0	1.2	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.5	<1.0	<1.0	
	03/22/05	270	NA	NA	<1.0	<1.0	2.4	1.4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.8	1.1	<1.0
	06/08/05	94	NA	NA	<1.0	<1.0	1.7	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.5	<1.0	<1.0	

¹ According to the laboratory report, results in the diesel organics range are primarily due to overlap from a gasoline range product.

² Also ND for TPH-k.

Table 15: Monitoring Well Analytical Results
4660 Hessel Road, Sebastopol

[illegible]

Table 15: Monitoring Well Analytical Results
4660 Hessel Road, Sebastopol

[illegible]

Table 15: Monitoring Well Analytical Results
4660 Hessel Road, Sebastopol

ID	Date	TPH-g	TPH-d	TPH-mo	B	T	E	X	EDC	MTBE	DIPE	ETBE	TAME	TBA	n-butylbenzene	sec-butylbenzene	Methyl ethyl ketone	Styrene	isopropylbenzene	p-isopropyltoluene	naphthalene	n-propylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Chloroform
		ug/L																							
MW-9D	11/27/00	<50	<50	<100	<0.3	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	02/28/01	<50	<50	<100	<0.3	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	05/29/01	<50	<50	<100	<0.3	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/22/01	<50	<50	<100	<0.3	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/26/01	<50	<50	<100	<0.3	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	02/26/02	<50	<50	<100	<0.3	0.32	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	05/29/02	<50	<50	<200	<0.5	<0.5	<0.5	<1.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/27/02	<50	NA	NA	0.44	<0.3	<0.5	0.99	<0.5	<0.5	NA	NA	NA	NA	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	11/20/02	<50	NA	NA	3.0	<0.3	0.71	0.87	<0.5	<0.5	NA	NA	NA	NA	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	0.54	<0.5	<0.5
	02/19/03	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	05/15/03	<50	NA	NA	<0.3	<0.3	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	0.54	<0.5	<0.5
	08/15/03	<50	NA	NA	0.42	1.1	0.55	2.2	<0.5	<0.5	NA	NA	NA	NA	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	08/21/03	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	NA	NA	NA	NA	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	11/21/03	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	03/02/04	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	06/07/04	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
09/02/04	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
01/04/05	74	NA	NA	<1.0	<1.0	<1.0	3.1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.2	<1.0	<1.0	
03/22/05	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
MW-10	11/27/00	<50	<50	<100	<0.3	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	02/28/01	<50	71	<100	0.85	3.9	1.4	4.0	<0.5	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	05/29/01	<50	<50	<100	<0.3	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/22/01	<50	<50	<100	<0.3	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/26/01	<50	<50	<100	<0.3	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	02/25/02	<50	<50	<100	<0.3	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	05/29/02	<50	<50	<200	<0.5	<0.5	<0.5	<1.5	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/26/02	<50	NA	NA	<0.3	<0.3	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	11/19/02	<50	NA	NA	<0.3	<0.3	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	02/19/03	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	05/14/03	<50	NA	NA	<0.3	<0.3	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	0.54	<0.5	<0.5
	08/20/03	<50	NA	NA	<0.3	<0.3	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	11/21/03	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	03/02/04	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	06/07/04	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	09/02/04	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
01/04/05	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	

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ID	Date	TPH-g	TPH-d	TPH-mo	B	T	E	X	EDC	MTBE	DIPE	ETBE	TAME	TBA	n-butylbenzene	sec-butylbenzene	Methyl ethyl ketone	Styrene	isopropylbenzene	p-isopropyltoluene	naphthalene	n-propylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Chloroform
		ug/L																							
MW-11D	11/27/00	<50	<50	<100	<0.3	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	02/28/01	<50	61	<100	4.6	29	3.7	15	<0.5	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	05/29/01	<50	<50	<100	<0.3	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/24/01	130	<50	<100	4.3	17	3.6	12	<0.5	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/27/01	<50	<50	<100	0.65	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	02/26/02	70	<50	<100	3.9	2.2	3.2	5.4	<0.5	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	05/30/02	<50	<50	<200	5.8	0.6	1.7	3.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	08/27/02	<50	NA	NA	0.78	<0.3	0.86	1.0	<0.5	<0.5	NA	NA	NA	NA	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	11/20/02	<50	NA	NA	4.0	0.57	1.9	2.3	<0.5	<0.5	NA	NA	NA	NA	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	0.55	<0.5	0.71	<0.5	<0.5
	02/19/03	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	05/14/03	<50	NA	NA	<0.3	<0.3	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	0.54	<0.5	<0.5
	08/20/03	<50	NA	NA	<0.3	<0.3	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	11/21/03	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	03/03/04	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	06/08/04	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	09/02/04	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	01/05/05	<50	NA	NA	<1.0	<1.0	<1.0	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	03/22/05	<50	NA	NA	<1.0	<1.0	<1.0	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	06/08/05	<50	NA	NA	<1.0	<1.0	<1.0	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-12	11/27/00	67,000	4,900	<100	2,100	14,000	1,700	8,800	<50	<50	<50	<50	<50	<1,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	02/28/01	33,000	1,800	160	1,500	5,700	630	3,100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	05/29/01	64,000	2,900 ¹	<100	2,200	7,200	1,000	5,300	19	<5.0	<5.0	<5.0	<5.0	<100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/24/01	59,000	2,500 ¹	<100	1,700	8,200	1,500	7,400	<50	<50	<50	<50	<50	<100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/27/01	40,000	800	<100	640	5,300	820	3,600	2.8	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	02/26/02	23,000	1,400 ¹	<100	1,600	760	660	1,300	<250	<250	<250	<250	<250	<5,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	05/30/02	16,000	2,000 ¹	<200	2,300	280	790	1,600	<50	<50	<50	<50	<50	<1,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/27/02	28,000	NA	NA	2,300	280	2,200	4,000	12	<5.0	NA	NA	NA	NA	<5.0	18	12	7	74	16	730	250	2,600	520	<5.0
	11/20/02	28,000	NA	NA	1,000	200	940	1,700	<0.5	<0.5	NA	NA	NA	NA	20	7.9	<1.0	<0.5	45	4.1	420	88	<0.5	260	<0.5
	02/19/03	14,000	NA	NA	1,200	200	680	920	<25	<25	NA	NA	NA	NA	<25	<25	<25	<25	29	<25	300	94	650	210	<25
	05/15/03	16,000	NA	NA	2,200	250	1,100	900	<50	<50	NA	NA	NA	NA	<50	<50	<100	<50	78	<50	500	140	950	300	<50
	08/21/03	18,000	NA	NA	840	340	790	1,200	<250	<250	NA	NA	NA	NA	<250	<250	<500	<250	<250	<250	300	<250	980	270	<250
	11/21/03	16,000	NA	NA	790	380	810	706	<20	<20	<20	<20	<20	<500	130	<20	<20	<20	37	<20	350	<20	1,100	290	<20
	03/04/04	7,800	NA	NA	710	180	490	442	<10	<10	<10	<10	<10	<250	<10	<10	<10	<10	26	<10	180	89	700	180	<10
	06/08/04	7,600	NA	NA	960	820	1,200	1,940	<10	<25	<25	<25	<25	<500	<25	<25	<25	<25	60	<25	480	210	1,600	440	<25
	09/02/04	11,000	NA	NA	460	720	670	1,185	<25	<25	<25	<25	<25	<500	<25	<25	<25	<25	36	<25	270	140	1,100	300	<25
	01/05/05	5,500	NA	NA	100	41	130	112	<2.0	<2.0	<2.0	<2.0	<2.0	<50	<2.0	3.0	<2.0	<2.0	9.2	3.8	62	36	240	65	<2.0
	03/22/05	8,800	NA	NA	21	5.8	39	31	<5.0	<5.0	<5.0	<5.0	<5.0	<100	7.1	<5.0	<5.0	<5.0	<5.0	<5.0	26	18	110	30	<5.0
	06/08/05	14,000	NA	NA	340	560	470	1,010	<5.0	<5.0	<5.0	<5.0	<5.0	<120	24	5.0	<5.0	<5.0	27	10	180	400	800	200	<5.0

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ID	Date	TPH-g	TPH-d	TPH-mo	B	T	E	X	EDC	MTBE	DIPE	ETBE	TAME	TBA	n-butylbenzene	sec-butylbenzene	Methyl ethyl ketone	Styrene	isopropylbenzene	p-isopropyltoluene	naphthalene	n-propylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Chloroform
		ug/L																							
MW-13D	11/27/00	150	<50	<100	36	0.55	1.1	1.5	3.7	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	02/28/01	360	65	<100	110	<0.3	<0.5	<0.5	10	<0.5	<0.5	<0.5	<0.5	26	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	05/29/01	390	<50	<100	100	<0.3	<0.5	<0.5	11	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/22/01	330 ³	<50	<100	79	<0.3	<0.5	<0.5	15	<0.5	<0.5	<0.5	<0.5	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/26/01	300	<50	<100	67	<0.3	<0.5	0.5	17	<0.5	<0.5	<0.5	<0.5	25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	02/25/02	190	<50	<100	45	1.6	0.58	<0.5	16	<0.5	<0.5	<10	<0.5	26	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	05/29/02	72	<50	<200	34	<0.5	<0.5	<1.5	15	<1.0	<1.0	<1.0	<1.0	<25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/26/02	130	NA	NA	20	<0.3	<0.5	<0.5	19	<0.5	NA	NA	NA	NA	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	11/19/02	130	NA	NA	8.8	<0.3	<0.5	<0.5	22	<0.5	NA	NA	NA	NA	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	02/19/03	73	NA	NA	5.7	<1.0	<1.0	<1.0	15	<1.0	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	05/15/03	<50	NA	NA	1.4	<0.3	<0.5	<0.5	19	<0.5	NA	NA	NA	NA	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	08/21/03	53	NA	NA	0.5	0.77	<0.5	1.4	11	<0.5	NA	NA	NA	NA	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	11/20/03	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	16	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	03/02/04	51	NA	NA	<1.0	<1.0	<1.0	<1.0	13	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	06/08/04	100	NA	NA	<1.0	<1.0	<1.0	<1.0	14	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	09/02/04	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	14	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	01/04/05	65	NA	NA	<1.0	<1.0	<1.0	2.1	9.8	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.9	<1.0	<1.0
	03/22/05	85	NA	NA	<1.0	<1.0	<1.0	<1.0	9.7	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	06/08/05	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

¹ According to the laboratory report, results in the diesel organics range are primarily due to overlap from a gasoline range product.

³ According to laboratory report, gasoline results are primarily due to the presence of benzene.

Table 15: Monitoring Well Analytical Results
4660 Hessel Road, Sebastopol

ID	Date	TPH-g	TPH-d	TPH-mo	B	T	E	X	EDC	MTBE	DIPE	ETBE	TAME	TBA	n-butylbenzene	sec-butylbenzene	Methyl ethyl ketone	Styrene	isopropylbenzene	p-isopropyltoluene	naphthalene	n-propylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Chloroform
		ug/L																							
MW-15D	11/27/00	32,000	2,600	<100	5,900	490	1,200	3,100	91	<25	<25	<25	<25	<500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	02/28/01	39,000	2,900	<100	7,500	510	1500	3,500	96	<0.5	<0.5	<0.5	<0.5	650	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	05/29/01	39,000	840 ¹	<100	6,000	360	940	2,100	80	<5.0	<5.0	<5.0	<5.0	330	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/24/01	45,000	1,700 ¹	<100	6,900	410	1,300	2,900	99	<50	<50	<50	<50	<1,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/26/01	42,000	1700	<100	7900	520	1600	3,600	120	<50	<50	<50	<50	<1,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	02/26/02	35,000	1,800 ¹	<100	4,800	<300	710	1,300	<500	<500	<500	<500	<500	<10,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	05/30/02	14,000	1,300 ¹	<200	4,600	220	680	1,300	2.1	<1.0	<1.0	<1.0	<1.0	<25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/27/02	32,000	NA	NA	4,300	310	840	1,300	81	<50	NA	NA	NA	NA	<5.0	9.4	<5.0	<5.0	37	8.8	320	110	550	240	<5.0
	11/20/02	32,000	NA	NA	4,100	260	660	1,900	67	<10	NA	NA	NA	NA	12	11	<20	<10	29	<10	360	79	590	180	<10
	12/30/02 ⁴	15,000	NA	NA	3,700	86	81	310	69	<0.5	NA	NA	NA	NA	1.4	0.65	<1.0	<0.5	1.4	<0.5	5.1	2.1	48	32	<0.5
	02/19/03	17,000	NA	NA	4,200	200	660	1200	64	<1.0	NA	NA	NA	NA	<50	<50	<50	<50	<50	<50	170	53	330	130	<50
	05/15/03	17,000	NA	NA	5300	200	820	1,000	64	<0.5	NA	NA	NA	NA	<50	<50	<100	<50	57	<50	220	79	280	130	<50
	08/21/03	27,000	NA	NA	4300	200	740	1300	<250	<250	NA	NA	NA	NA	<250	<250	<500	<250	<250	<250	<250	<250	380	<250	<250
	11/21/03	14,000	NA	NA	4300	190	810	610	<50	<50	<50	<50	<50	<1,000	<50	<50	<50	<50	<50	<50	230	68	470	150	<50
	03/04/04	11,000	NA	NA	3800	180	660	1,153	50	<50	<50	<50	<50	<1,000	<50	<50	<50	<50	<50	<50	210	74	380	140	<50
	06/08/04	9,100	NA	NA	3200	120	580	870	<50	<50	<50	<50	<50	<1,000	<50	<50	<50	<50	<50	<50	180	<50	290	110	<50
	09/02/04	9,700	NA	NA	4,400	180	850	1,100	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	190	68	470	150	<1.0
	01/04/05	17,000	NA	NA	4,100	140	750	910	<50	<50	<50	<50	<50	<1,000	<50	<50	<50	<50	<50	<50	210	60	360	140	<50
	03/22/05	22,000	NA	NA	3,500	320	700	1,520	<50	<50	<50	<50	<50	<1,200	<50	<50	<50	<50	<50	<50	<50	76	520	160	<50
	06/08/05	12,000	NA	NA	2,400	100	450	540	<50	<50	<50	<50	<50	<1,200	<50	<50	<50	<50	<50	<50	120	<50	250	78	<50

¹ According to the laboratory report, results in the diesel organics range are primarily due to overlap from a gasoline range product.

⁴ Confirmation sample collected on December 30, 2002, as the sample collected on November 20, 2002 was inadvertently collected from MW-15D and labeled as MW-16.

Table 15: Monitoring Well Analytical Results
4660 Hessel Road, Sebastopol

ID	Date	TPH-g	TPH-d	TPH-mo	B	T	E	X	EDC	MTBE	DIPE	ETBE	TAME	TBA	n-butylbenzene	sec-butylbenzene	Methyl ethyl ketone	Styrene	isopropylbenzene	p-isopropyltoluene	naphthalene	n-propylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Chloroform
		ug/L																							
MW-16	11/27/00	250	<50	<100	16	2.9	1.4	3.3	3.6	<0.5	<0.5	<0.5	<0.5	22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	02/28/01	300	60	<100	48	0.67	1.5	2.5	3.7	<0.5	<0.5	<0.5	<0.5	46	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	05/29/01	390	<50	<100	47	<0.3	<0.5	<0.5	3.4	<0.5	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/24/01	550	<50	<100	29	<0.3	0.51	0.61	4.9	<0.5	<0.5	<0.5	<0.5	33	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/26/01	370	73	<100	16	0.55	2	3.4	5.9	<0.5	<0.5	<0.5	<0.5	34	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	02/26/02	150	<50	<100	15	<0.3	1.2	2.1	2.6	<0.5	<0.5	<0.5	<0.5	18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	05/30/02	72	<50	<200	9.9	0.52	1.6	2.4	2.1	<1.0	<1.0	<1.0	<1.0	<25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/27/02	140	NA	NA	7.3	0.4	1.3	1.3	2.8	<0.5	NA	NA	NA	NA	<0.5	<0.5	<0.5	<0.5	0.67	<0.5	<0.5	<0.5	0.79	<0.5	<0.5
	12/30/02 ⁴	200	NA	NA	5.9	<0.3	<0.5	1.2	5	<0.5	NA	NA	NA	NA	NA	<0.5	<0.5	<1.0	<0.5	0.84	<0.5	<0.5	<0.5	<0.5	<0.5
	02/19/03	120	NA	NA	4.5	<1.0	<1.0	<1.0	2.7	<1.0	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	05/15/03	110	NA	NA	5.4	<0.3	<0.5	<0.5	2.7	<0.5	NA	NA	NA	NA	NA	<0.5	<0.5	<1.0	<0.5	0.81	<0.5	<0.5	<0.5	<0.5	<0.5
	08/21/03	190	NA	NA	2.8	<1.5	<2.5	<2.5	3.8	<2.5	NA	NA	NA	NA	NA	<2.5	<2.5	<5.0	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
	11/21/03	190	NA	NA	<1.0	<1.0	<1.0	<1.0	3.8	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	03/03/04	150	NA	NA	1.5	<1.0	<1.0	<1.0	2.4	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	06/08/04	180	NA	NA	<1.0	<1.0	<1.0	<1.0	2.9	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	09/02/04	130	NA	NA	1.2	<1.0	<1.0	<1.0	3.7	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
01/04/05	230	NA	NA	3.9	<1.0	<1.0	<1.0	1.5	4.3	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
03/22/05	120	NA	NA	2.0	<1.0	<1.0	<1.0	2.5	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
06/08/05	8,500	NA	NA	8.8	420	190	1,290	<1.0	<1.0	<1.0	<1.0	<1.0	<25	69	9.6	<1.0	<1.0	17	22	300	76	1,000	250	<1.0	
⁴ Confirmation sample collected on December 30, 2002, as the sample collected on November 20, 2002 was inadvertently collected from MW-15D and labeled as MW-16.																									
MW-17D	03/02/04	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	06/08/04	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	09/02/04	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	01/04/05	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	03/22/05	450	NA	NA	2.0	27	6.6	43	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	4.6	1.5	16	3.7	<1.0
	06/08/05	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

**Table 15: Monitoring Well Analytical Results
4660 Hessel Road, Sebastopol**

ID	Date	TPH-g	TPH-d	TPH-mo	B	T	E	X	EDC	MTBE	DIPE	ETBE	TAME	TBA	n-butylbenzene	sec-butylbenzene	Methyl ethyl ketone	Styrene	isopropylbenzene	p-isopropyltoluene	naphthalene	n-propylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Chloroform
		ug/L																							
MW-18	03/02/04	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	06/08/04	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	09/02/04	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	01/04/05	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	03/22/05	720	NA	NA	1.8	38	11	70	<1.0	<1.0	<1.0	<1.0	<1.0	<25	1.5	<1.0	<1.0	<1.0	<1.0	<1.0	4.7	3.2	26	8.0	<1.0
	06/08/05	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-19D	03/03/04	<50	NA	NA	<1.0	<1.0	<1.0	1.3	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	8.5	<1.0	<1.0	<1.0	<1.0
	06/08/04	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	4.4	<1.0	<1.0	<1.0	<1.0
	09/02/04	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	01/04/05	78	NA	NA	<1.0	2.2	<1.0	6.9	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.8	1.1	<1.0
	03/22/05	<50	NA	NA	<1.0	<1.0	<1.0	1.2	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	06/08/05	<50	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-20	03/03/04	7,800	NA	NA	400	2,600	460	3,420	<25	<25	<25	<25	<25	<500	<25	<25	<25	<25	26	<25	250	87	1,100	300	<25
	06/08/04	14,000	NA	NA	320	1,300	240	1,490	<25	<25	<25	<25	<25	<600	<25	<25	<25	<25	<25	<25	120	47	440	140	<25
	09/02/04	16,000	NA	NA	340	1,700	350	1,830	<25	<25	<25	<25	<25	<500	36	<25	<25	<25	<25	<25	170	78	840	250	<25
	01/04/05	15,000	NA	NA	330	1,100	150	1,470	<25	<25	<25	<25	<25	<500	<25	<25	<25	<25	<25	<25	140	51	590	180	<25
	03/22/05	42,000	NA	NA	640	4,200	980	6,100	<25	<25	<25	<25	<25	<600	75	<25	<25	<25	65	<25	680	230	2,600	680	<25
	06/08/05	370000 ⁵	NA	NA	2,200	24,000	7,200	57,000	<200	<200	<200	<200	<200	<5,000	22,000	2,700	<200	<200	1,900	2,100	46,000	12,000	150,000	42,000	<200

Note: TPH-d and TPH-mo removed from analytical suite for all wells with regulatory concurrence in August 20, 2002 letter.

¹ According to the laboratory report, results in the diesel organics range are primarily due to overlap from a gasoline range product.

² Also ND for TPH-k.

³ According to laboratory report, gasoline results are primarily due to the presence of benzene.

⁴ Confirmation sample collected on December 30, 2002, as the sample collected on November 20, 2002 was inadvertently collected from MW-15D and labeled as MW-16.

⁵ The sample exhibited floating product. The sample for analysis was taken from beneath the floating product surface.

**STANDARD
SOIL AND WATER SAMPLING PROCEDURES
AND QA/QC PROTOCOL**

December 15, 2003

**SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS**

STANDARD SOIL SAMPLING PROCEDURES

The following outline describes the standard equipment and procedures used by SCS Engineers (SCS) personnel for the collection of soil samples for laboratory analysis.

Equipment

Modified California split-spoon drive sampler, standard penetration sampler, or direct push core barrel (Drill rig sampling)

Drive sampler (hand auger samples)

Typical 1.5-inch to 2.0-inch diameter by 6.0 inch long brass or stainless steel liners and plastic end-caps. Teflon sheets or aluminum foil will also be used for samples suspected of containing volatile compounds (gasoline, aromatic hydrocarbons, solvents, etc.)

Appropriate sample holders will be used for samples suspected of containing volatile compounds (gasoline, aromatic hydrocarbons, solvents, etc.) when EPA Method 5035 sampling is required by the regulatory agency. Standard sample containers will be used when field preservation occurs for EPA Method 5035 compliance.

Typical 1.5-inch to 2.5-inch diameter by 6.0 inch long plastic or metal liners for direct push core barrel.

PID organic vapor analyzer (OVA) or equivalent Field Detector

Sampler and Sample Container Cleaning Equipment:

- Stiff-bristle brushes

- Buckets

- Detergent (Non-phosphate detergent recommended)

- Deionized/potable water

Insulated sample storage and shipping containers (ice chests) and blue ice

Insulated sample storage and shipping containers (ice chests) and dry ice for EPA Method 5035 sample holders which cannot be delivered to the laboratory within 48 hours for preservation

Personal protective equipment (generally level D protection).

General Sampling Procedures

Soil samples are collected in accordance with regulatory guidance. Soil sampling procedures are updated as new guidance is provided by regulatory agencies.

Sampling equipment (i.e., sample liners, auger bits, sampling devices) are pre-washed as necessary with a brush in a detergent solution, followed by double rinsing with distilled or deionized water prior to each sampling event. All new sample liners will have been pre-washed

prior to use. All samples are collected in such a manner as to minimize the volatilization or oxidation due to agitation and/or mixing upon handling.

Soil samples collected by hand augering for lithologic logging, and for chemical and physical analyses are typically obtained by pounding the sample tube into the soil being tested. If an auger hole is drilled with a motorized drill rig, samples are typically collected using a drive sampler, which is driven approximately 18 to 24 inches below the depth of the auger bit. The sampling methodology may be adjusted on a case-by-case basis, depending on the suspected contaminant(s). Where required, EPA Method 5035 sample holders will be filled as rapidly as possible to prevent volatilization from either a sample sleeve or directly from the formation where feasible.

Soil samples collected from a backhoe bucket or from an accessible pit or excavation (ramped or shored) are collected by removing excess material to expose as fresh as possible soil. The sample liner is then pushed into the soil until the liner is full. Where required, EPA Method 5035 sample holders will be filled as rapidly as possible to prevent volatilization directly from the formation or from the backhoe bucket after a small amount of material is removed to expose a fresh surface where feasible.

Standard metal liners will be submitted for analysis in those circumstances where EPA Method 5035 sample holders are deemed to be unusable (gravel or extremely dense material). EPA Method 5035 preservation times will still be required of the laboratory.

When utilizing the split spoon sampler with a drill rig, the portions of the soil sample recovered in additional liners are also examined and noted for any contamination and/or changes in lithology.

The soils, when required, are classified in accordance with the Unified Soil Classification System (USCS). Sample liner ends selected for analysis are typically covered with teflon sheets and sealed with plastic end caps, stored in a cooler (4° C), and transported to a California Department of Health Services Certified Analytical Laboratory for the requested analyses (except where there is no State certification for the analysis being conducted). If storage is required prior to delivery to the laboratory or laboratory courier, the samples are stored in a secure refrigerator prior to delivery.

EPA Method 5035 sample holders used to comply with EPA Method 5035 sample collection procedures will be collected and stored in a cooler (4° C), and transported to a California Department of Health Services Certified Analytical Laboratory for preservation within 48 hours of sample collection. In the event the samples cannot be delivered to the Laboratory to meet the 48 hour preservation requirement, the samples will be placed in an ice chest with dry ice and kept frozen either in the ice chest with adequate dry ice or in a secure freezer until they can be

delivered to the Laboratory for proper preservation. The Laboratory may receive the samples at the job site for field preservation, in which case standard sample tubes will be used.

All sample containers are labeled in the field. The sample labels will typically contain the following information:

- Sample identification number (including depth and stratigraphic position where applicable)
- Project name
- Project address
- Sampler initials
- Date of collection
- Other pertinent information

Chain-of-Custody documents are completed in the field and accompany the samples to the laboratory. The Chain-of-Custody document will typically contain the following information:

- Sample identification number (including depth and stratigraphic position where applicable)
- Project name
- Project address
- Project number
- Sampler (printed and signed)
- Date and time of collection (for each sample)
- Matrix type (soil, water, etc.)
- Analyses and turn-around-time requested
- Billing Information
- Other pertinent information

Stockpile Sampling

Discrete samples from thin stockpiles are collected in brass or stainless steel liners, by removing 6 inches to 1 foot of soil and driving the brass or stainless steel liner into the stockpile. Soil samples are collected from thick stockpiles containing volatile contaminants by either augering or otherwise excavating approximately one third to one half way into the pile and then driving the sample liner into the soil in the hole, or collecting a sample from the backhoe bucket. Surface or near surface samples will be collected from homogenized stockpiles containing non-volatile contaminants such as metals, motor oil, or oil and grease.

For final verification characterization, discrete soil samples will be collected at intervals required by regulation, or by the lead regulator for the disposal or treatment option selected.

EPA Method 5035 sampling procedures, as indicated above, will be followed for discrete and/or verification sampling when directed by the regulatory agency and/or the receiving facility. EPA Method 5035 sampling procedures, as described above, will not be followed for composite sampling for disposal unless directed by the landfill(s) in order to profile the soil for disposal.

STANDARD GROUNDWATER SAMPLING PROCEDURES

The following outline describes the standard equipment and procedures which are used by SCS personnel for the collection of groundwater samples for laboratory analysis.

Monitoring Well Development

After monitoring wells are installed and prior to initial sampling of the wells, well development is conducted. Well development is conducted to create an effective filter pack around the well screen, to optimize hydraulic communication between the formation and the well screen, and to assist in restoring the natural water quality near the well. Well development is also conducted to remove fines and to remove any foreign materials introduced during drilling.

Well development will be conducted as follows:

1. Record the static water level and total well depth.
2. Set the pump and record the pumping rate. Pump until the turbidity reaches the desired level, typically measured using a turbidity meter.
3. Discontinue pumping and begin surging using a properly designed surge block and proper surging technique.
4. Measure and record well depth to determine the amount of fines and repeat Step 2.
5. Repeat surging and pumping until the well yields water of acceptable turbidity at the beginning of a pumping cycle.

Depending on the depth of the water, the hydraulic conductivity of the aquifer, and the diameter of the well, pumping may effectively achieve well development. Wells completed in very silty geologic units also may produce consistently turbid samples. Wells of this type will normally be considered to have been properly installed and developed and turbid water samples will be considered representative of mobile constituents in the aquifer.

Monitoring Well Sampling

Groundwater sampling and evaluation of monitoring wells begins by removal of the well caps and measuring water levels in all monitoring wells at a site with a water level indicator. The

fluid in the well is then monitored for the presence of free floating material. If free product is present in the well, its thickness is measured using an oil-water interface probe. A program of free product removal may be initiated. A groundwater sample is typically not collected from any well with confirmed free floating product unless a directive to do so is received from the regulatory agency. All monitoring wells are typically checked for free product until authorization has been received from the lead regulatory agency that checking for free product is no longer necessary. Water levels will continue to be checked until field measurements indicate that equilibrium has been achieved from which to compute the groundwater flow direction and gradient.

If free product is not present in the well being monitored, the well is purged, with groundwater parameters such as pH, conductivity, and temperature measured after each well volume removed. This process continues until parameters being measured such as pH, conductivity, and temperature, have generally stabilized (reproducible within 10%). As a general practice, a minimum of 3 well casing volumes or until the well goes dry constitutes adequate purging. For 2-inch diameter wells, a minimum of 5 gallons of water should be removed unless the well goes dry. Wells will be purged from least to most contaminated after the initial round of sampling. The purge pump will be placed near the top of the measured water table to assure that fresh water from the formation will move upward in the screen. Water will be purged from the well at a rate that does not cause recharge water to be excessively agitated. The purge pump will be lowered into the well as necessary to achieve the desired removal of groundwater.

Once a well has been adequately purged, a groundwater sample is collected using a disposable or pre-cleaned bailer. The groundwater sample is collected from the well in containers appropriate to the analyses being conducted. As examples, 1 liter amber bottles are used for diesel/motor oil/kerosene and oil and grease analyses, 40 milliliter volatile organic analysis vials are used for gasoline BTEX, 8010, 8240, and 8260 analyses, and plastic containers are used for total and/or dissolved metals. Volatile organic analysis vials will be immediately capped after collection and placed on ice to minimize loss of volatiles. All other groundwater sample containers collected will be capped and placed in a storage container in a timely manner and as appropriate for the analysis being conducted. Proper containers, sampling collection procedures, and storage requirements will be verified with the analytical laboratory prior to sample collection. Monitoring wells at a site are purged prior to collection of samples, unless the regulatory agency has approved non-purge samples.

After the wells have been adequately purged, they will be allowed to recover to 80% of their original volume prior to sampling. Any well purged to dryness will be sampled after a sufficient volume of groundwater has entered the well to enable the collection of the necessary groundwater samples.

All collected groundwater samples are stored in an ice chest on blue ice and transported under Chain-of-Custody documentation. The samples are either transported directly to the analytical laboratory on the day of collection, delivered to the laboratory courier on the day of collection,

or are returned to SCS's office where they are stored in a secure refrigerator and then delivered to a California Department of Health Services Certified Analytical Laboratory or a laboratory courier for the requested analyses (except where there is no State certification for the analysis being conducted). Every effort will be made to assure that sample storage will not exceed 72 hours before delivery of the samples to either the laboratory or the laboratory courier. Samples being analyzed for constituents with a longer holding time, such as metals, may be stored for a longer period of time, provided the holding time is not exceeded, before delivery to the laboratory.

Where more than one site is sampled on the same day by the sampler, samples from each site will be stored in separate ice chests. If feasible, samples suspected of being highly impacted will be stored separately from samples which are presumed to be clean. To the extent feasible, samples will be separated based on site and suspected degree of impact while awaiting delivery to or pick up by the analytical laboratory.

All purged fluid is stored on-site in DOT 55-gallon drums pending analysis. The drums and the fluid in the drums are the exclusive property and responsibility of the responsible party. SCS typically samples the drums and arranges for disposal at the appropriate time.

Grab Water Samples

Grab water samples may be collected from the pits, borings, discrete sampler borings, creeks, ponds, and any other bodies or vessels containing water. If the water sample can be safely collected by hand, it will be, otherwise, a disposable bailer will typically be used to collect the sample.

All collected grab water samples will be stored on ice and transported under Chain-of-Custody documentation. The samples will either be delivered directly to the analytical laboratory or to the analytical laboratory courier on the day of the collection, or they will be returned to SCS's office where they will be stored in a secure refrigerator a maximum of 72 hours, and then delivered to a California Department of Health Services Certified Analytical Laboratory for the requested analyses (except where there is no State certification for the analysis being conducted) or the laboratory courier. Again, samples being analyzed for constituents with a longer holding time, such as metals, may be stored for a longer period of time before delivery to the laboratory.

Typically, no purge water will be generated during grab water sampling. Should purging occur, the purge water will be stored on-site in either a DOT 55-gallon drum, or other appropriate vessel, pending analysis. Industry standards are that drums and all produced water are the exclusive property and responsibility of the responsible party. SCS will typically sample such containers and arrange for disposal at the appropriate time.

Sample Handling-QA/QC Elements

Sample Handling

The elapsed time between sample collection and delivery to the laboratory or the laboratory courier will typically not exceed 72 hours. Again, samples being analyzed for constituents with a longer holding time, such as metals, may be stored for a longer period of time before delivery to the laboratory, providing the holding time is not exceeded.

Sealed sample containers will only be opened by laboratory personnel during the specified sample extraction process.

Chain-of-Custody

In order to document and trace sample possession from time of collection, a Chain-of-Custody record will be filled out on the Chain-of-Custody document by the sampler for each sample collected. The Chain-of-Custody document will accompany the sample(s) through laboratory analysis. The completed Chain-of-Custody record for each sample will be included in the analytical report from the laboratory.

Blanks

Blanks will be used or collected as part of the sampling program at the discretion of the project manager and/or the lead regulatory agency. Trip and/or field blanks will be supplied and analyzed along with the samples, at the discretion of the project manager and/or the lead regulatory agency.

Modifications

Any modification to the standard sampling procedures and QA/QC protocol outlined in this document for either soil or water samples will be noted and fully explained in the sampling report.

PERSONAL PROTECTION

Sampling at environmental sites increases the chance of exposure of the sampling technician to chemicals which pose a threat to the environment and may pose a threat to the sampler's short-term and/or long-term health at the concentrations present. Each site will be evaluated prior to conducting any field work to ascertain the chemicals detected in the past, the chemicals likely to be detected in the future, and the likely concentrations of those chemicals to be detected. The

chemicals will be evaluated for possible routes of exposure at the concentrations likely to be encountered. Appropriate personal protective equipment to prevent contact with contaminants shall be used. Appropriate chemical-specific gloves shall be worn and changed between sampling events.

In the event the sampler observes or detects activities occurring on or around the site which could cross contaminate collected samples, the sampler will suspend sampling until the activities which may lead to cross contamination cease. If necessary, the sampler will abort the sampling event. Any aborted sampling event will be rescheduled after the suspicious activities are indicated to have ceased, or the activities can be halted during the sampling event. Any suspension or aborting of sampling will be immediately reported to the appropriate registered professional.

Site-specific protection measures are outlined in the Site Health and Safety Plan, where active investigation and/or remediation is occurring.

Active Investigation and/or Remediation
(Refer to Site Specific Health and Safety Plan)

Required personal protective equipment:

Hardhats
Steel toed boots

Recommended personnel protective equipment:

Eye protection
Hearing protection
Gloves to protect against dermal contact with contaminants
Skin protection from sunlight
Photoionization detector/Gas Tech
Respirator (NIOSH approved with appropriate filters for contaminants detected or expected)
Detergent wash and rinse water
First aid kit
Fire extinguisher
Route map to and phone number of nearest hospital

As indicated above, each site must be evaluated on a case-by-case basis to determine the appropriate personal protection materials to use and personal protection activities to implement in the field. As an example, several sun tan lotions contain chemicals which are detected in the diesel range. Care must be taken to prevent cross contamination by sun tan lotion at diesel impacted sites.

Passive Investigation

Recommended personnel protective equipment:

Skin protection

Eye protection

Gloves to protect against dermal contact with contaminants

Detergent wash and rinse water

First aid kit

Fire extinguisher

Route map to and phone number of nearest hospital

As indicated above, each site must be evaluated on a case-by-case basis to determine the appropriate personal protection materials to use and personal protection activities to implement in the field. If a site is known to be heavily impacted, wells should be sampled from the cleanest to most impacted to minimize the potential for cross contamination. The potential for cross contamination can be further minimized by wearing disposable gloves and disposing of gloves after each sample is collected. As an alternative, hands can be washed and rinsed between each sampling event. Where contaminants are non-volatile and do not migrate readily, such as metals, personal protection can be modified to match the primary routes of exposure, which are inhalation and ingestion. In this case it may be appropriate to wear a dust mask if excessive dust is created during sampling. Washing of hands and face before eating or drinking is highly recommended. Protection of clothing by wearing Tyveks is also to be considered, along with washing clothing after each use in conditions where significant dust is created.

Personal protection is designed to prevent or minimize the exposure to the sampler of chemicals or substances which may adversely impact either the short-term or long-term health of the sampler. It is the sampler's responsibility to adequately protect themselves from exposure. All samplers are encouraged to protect themselves and their health to the extent feasible while in the field. All materials necessary to provide adequate protection are available and should be utilized as appropriate.

Cross contamination is to be minimized at all times while sampling. In some instances, proper use and implementation of personal protection will also aid in minimizing cross contamination. The sampler is very highly encouraged to implement proper personal protection, especially where it further minimizes the risk of cross contamination of samples.

SITE HEALTH AND SAFETY PLAN SUMMARY

Primary Emergency Contact: 911

**Palm Drive Hospital
501 Petaluma Avenue
Sebastopol, CA 95472
T: (707) 823-7414**

Secondary Emergency Contacts:

SCS Project Manager: (707) 546-9461

Kevin Coker

Underground Service Alert: (800) 227-2600

Owner Representative: (707) 823-1976

Site Location: 4660 Hessel Road
Sebastopol, California

Proposed Work Period: November 2005

Objective of Field Work: Install three monitoring wells

Type/Status of Site: Residential

Size of Site: < 1 acre

Land Use of Area Surrounding Facility: Residential, agricultural

Factors Prompting Closure: Regulatory compliance

Residue Type: Petroleum Hydrocarbons, other VOC's

Route of Exposure: Possible inhalation, ingestion, and skin contact

Physical Hazards: Slip, trip and fall
Proximity to heavy equipment


Levels of Protection: Level D, minimum

Air Monitoring Equipment: PID

Action Levels: OVM>50 ppm




HOSPITAL LOCATION MAP AND DIRECTIONS

Palm Drive Hospital
501 Petaluma Avenue
Sebastopol, CA 95472
T: (707) 823-7414

Starting from:  4660 Hessel Road, Sebastopol

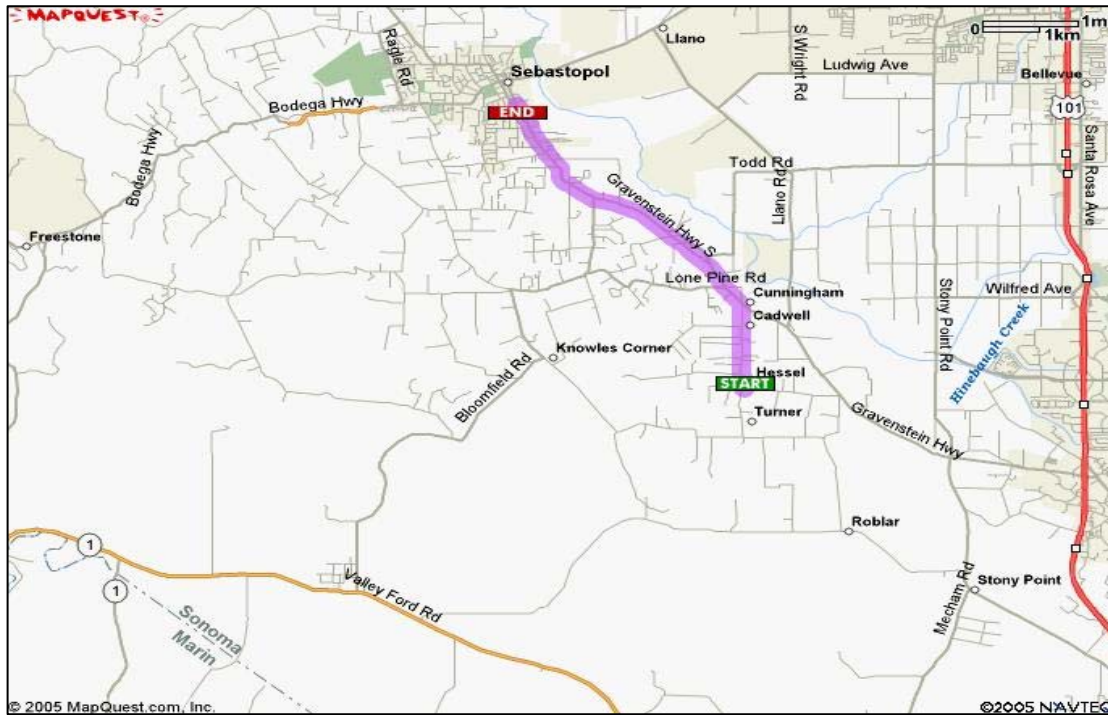
Arriving at:  **Palm Drive Hospital**
501 Petaluma Avenue
Petaluma, CA 95472
T: (707) 823-7414

Distance: 1.24 miles **Approximate Travel Time:** 3 Minutes

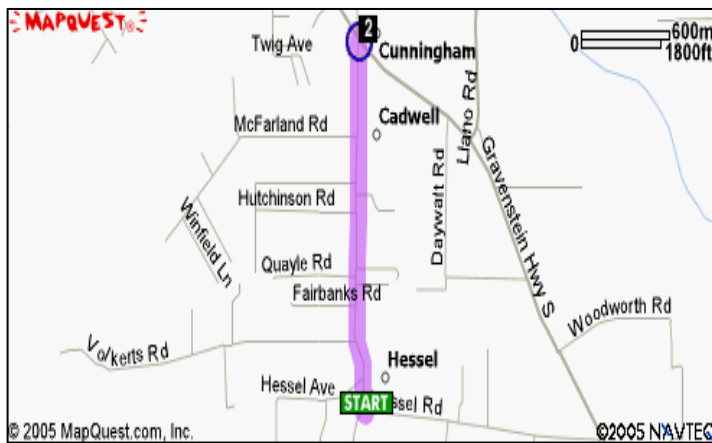
Directions	Distance
 1: Start out going NORTH on HESSEL RD toward TURNER RD.	1.0 miles
 2: Turn SLIGHT LEFT onto GRAVENSTEIN HWY S / CA-116. Continue to follow CA-116 W.	3.5 miles
 3: End at 501 Petaluma Ave Sebastopol, CA 95472-4215, US	
Total Est. Time: 11 minutes Total Est. Distance: 4.61 miles	

MAPS OF HOSPITAL ROUTE AND VICINITY

GENERAL ROUTE



START



END



SCS ENGINEERS

Site Health and Safety Plan for Hazardous Waste Site Operations

Instructions:

1. Preparation

Obtain as much background information as possible on the site. Coordinate with safety management as soon as possible. Address every section of the plan. If no appropriate information is available, say so. If a section is not relevant, state that. General safety directives are given for types of hazards which may be found. If those hazards will not be encountered, those sections may be deleted to facilitate clarity of the plan.

2. Review/Approval

Formal approval of this Health and Safety Plan (Plan) requires the signatures of:

The Project Manager

The Office Health and Safety Officer/Administrator.

Approval remains in effect until the Plan expiration date. Extension of the expiration date requires re-review of the Plan by safety management, and the attachment of a letter of extension.

3. Implementation

As soon as possible, before the mobilization for field work, a copy of the approved Plan will be given to every member of the field team including subcontractors. Each member of the team will be required to read the Plan.

A copy of the Plan will also be given to the client.

A safety meeting will be held during which the Plan will be reviewed. Following the review, should there be no questions or problems, all members of the field team will sign a copy of the Plan which will be given to the office health and safety officer/administrator for filing.

SCS ENGINEERS

Site Health and Safety Plan for Hazardous Waste Site Operations

BACKGROUND

SCS Engineers is committed to providing a safe and healthy work environment for all its employees. In order to assure that the safety and health of each employee is protected at the Site, the SCS Health and Safety Plan shall be in force for the duration of the project. This project control document has been prepared to establish safe procedures and practices in accordance with OSHA's Safety and Health Standard 29 CFR 1910.120.

PROJECT DESCRIPTION

The scope of work for this project involves the installation of three monitoring well at a underground former storage tank (UST) site.

ORGANIZATIONAL STRUCTURE

The following sections describe the personnel who will be directly involved in the project and their responsibilities and authority with respect to enforcing site safety.

One of the most critical elements in worker safety is the attitude of all levels of project management. A strong and visible commitment to worker safety will be present throughout the project. In addition to the internal management structure, several non-company personnel will be interfacing with SCS during the course of the project. These include subcontractors, community regulators, police, fire fighters, and other advisory personnel.

Project Manager

The Project Manager has the ultimate responsibility for health and safety of all personnel during the project. The Project Manager (Kevin Coker) is responsible for procuring proper safety equipment and for site audits.

Site Safety Officer

The Site Safety Officer will be assigned to senior SCS employees during different phases of the field work and has the responsibility for the on-site implementation of the Site Health and Safety Plan. The Site Safety Officer will be present at the site during field activities that require implementation of the Site Health and Safety Plan and will be responsible for checking that this plan is followed by field personnel during site activities.

The Site Safety Officer will receive technical support from the Project Manager. The Site Safety Officer's responsibilities also include, but are not limited to the following:

- Verify that appropriate personal protective equipment is available and is properly utilized by the necessary personnel.
- Ensure that personnel are aware of the provisions of this plan and have been instructed in proper work practices and emergency procedures.
- Monitor the activities of the personnel to ensure that safe operating procedures and practices are employed at all times.
- Direct the work of technicians who may be required to assist in performing air monitoring activities.
- Document all aspects relating to health and safety at the site.
- Report unsafe acts or conditions to the appropriate supervisory personnel.
- Act as the technical liaison to regulatory agency personnel on matters pertaining to employee, community, and environmental health and safety.

September 20, 2005

The Site Safety Officer will communicate on an ongoing basis with the personnel involved in the investigation activities to evaluate changing site conditions. The Site Safety Officer will have the authority to stop all work activities and require modifications to the work practices if violations of the Site Health and Safety Plan are occurring.

SCS Job Superintendent's Responsibilities

- Read, understand, and accept the Site Health and Safety Plan.
- Attend the site safety training.
- Conduct daily tailgate safety meetings.
- Ensure that the proper personal protective equipment is available at the site.
- Ensure that safe work practices are employed at all times.
- Enforce corrective action under the direction of the Site Safety Officer.
- Act as the Site Safety Officer in the absence of the corporate Safety Officer.
- Inform the Site Safety Officer of any conditions which may require amendment to the Site Health and Safety Plan, or any other hazard to the health and well being of employees or the community.

Subcontractors' Responsibilities

Subcontractors are responsible for ensuring that their employees comply with the requirements of the Site Health and Safety Plan. The responsibilities of all subcontractors with respect to safety are:

- Read, understand, and accept the Site Health and Safety Plan.
- Have all members of the work crew attend the mandatory safety training.
- Have all members of the work crew attend all mandatory daily tailgate safety meetings.
- Ensure that equipment and other machinery are properly inspected and maintained and in compliance with applicable sections of the Occupational Health and Safety Code.
- Supply and maintain the required personal protective equipment.
- Ensure that the work crew complies with the Site Health and Safety Plan.
- Enforce corrective action under the direction of the Site Safety Officer.

Field Team Members' Responsibilities

The responsibilities of the field team members with respect to safety are:

- Read, understand, and accept the Site Health and Safety Plan.
- Follow the directions of the Job Superintendent, Safety Officer, and all contractors' representatives.
- Attend the site safety meeting.
- Attend all daily tailgate safety meetings.
- Perform all work in compliance with this Site Health and Safety Plan, as well as all federal, state, and local occupational safety and health regulations.
- Report any condition which that pose a threat to the health and well being of employees or the community to the Site Safety Officer and/or the Project Manager.

I. ADMINISTRATIVE INFORMATION

A. Project Description: Field Investigation

Project Name: John Riddell

Project No.: 01203317.00

Site Location: 4660 Hessel Road
Sebastopol, California

Work Summary: Installation of three monitoring wells

Prepared by: Tanya Gallegos **Date:** September 20, 2005

Proposed Date(s) of Operation: November 2005

Project Manager Approvals: **Date:** September 20, 2005

Date of Issue: September 23, 2005

Date of Expiration: November 2006

B. Scope of the Safety Plan

This Site Health and Safety Plan is intended to meet the requirements of GISO Title 8, Article 5192, 29 CFR 1910.120 and the EPA Standard Operating Safety Guides for Hazardous Waste Operations (1986). All employees involved in field work at this site have completed the required 40 hours initial training, maintain qualification through annual refresher training, and are under a program of medical monitoring. All employees involved in field work at this site will either be respirator certified or will vacate the site if respiratory protection becomes necessary to continue work.

This plan was prepared from the best available evidence concerning site conditions. It is recognized that conditions on a site may change or that more information may become available during the operation. Unless specified in this Site Health and Safety Plan, the field team does not have the option to modify the levels of personal protection in any way. If during the operation, it is determined that the protection specified in the Site Health and Safety Plan requires modifications, work will cease, and the site safety officer (SSO) will contact the project manager and/or safety representative. Work will not resume until authorized.

C. Field Team Assignments

SCS FIELD TEAM ASSIGNMENTS

<u>Duty</u>	<u>Name</u>
Project Manager:	Kevin Coker
Site Safety Officer:	tbd
Job Superintendent:	tbd

D. Subcontractors

The following subcontractors will perform work during this operation. All employees of subcontractors performing work with the potential for exposure to hazardous waste shall meet the requirements of 29 CFR 1920.120.

Name: **Telephone No:**

Address:

Authorized Representative: Mr. John Riddell

Services Provided: Installation of three monitoring wells

Contract No.: **Date:**

E. Safety Compliance Agreement Form

Site: 4660 Hessel Road, Sebastopol, California **Project No.:** 01203317.00

I the undersigned, acknowledge that I have attended the safety meeting, and received a copy of this Site Health and Safety Plan. I have read and understood the Safety Plan, and do agree to adhere to the requirements specified by it. I understand that I may be prohibited from continuing work on the project for failing to comply with this Safety Plan.

Signature	Name Printed	Company	Date
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
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_____	_____	_____	_____
_____	_____	_____	_____

Meeting Conducted by:

Signature

F. Subcontractor Compliance Agreement

Site: 4660 Hessel Road, Sebastopol, California

Project No.: 01203317.00

Company Name:

Telephone No.:

I acknowledge that as an authorized representative of this company, I have read and understood the Site Health and Safety Plan to be used for these site activities. I understand that hazardous materials and activities may be encountered during this operation, and that the scope of these operations is covered by 29 CFR 1910.120.

I certify that all employees of this company which will be assigned to this operation will be under the company safety program which is in compliance with all federal and local regulations.

Name (Printed)

Title

Signature

Date

II. SITE BACKGROUND

- A. **Site Physical Description:** The subject Site is currently a residential home.
- B. **Site History: (Activities, Incidents, etc.):** The underground storage tanks were removed from the site in January 1995.
- C. **Types of Materials Known to Have Been Used On the Site** Petroleum fuels
- D. **Materials Known or Suspected to Remain On-Site:** Residual soils and groundwater impacted by petroleum fuel
- E. **Site Status: (Active/Inactive, Agency Actions):** Active

Has the site been adequately characterized to the best of your knowledge? Yes ____ No X

III. DESCRIPTION OF WORK TO BE PERFORMED: (the tasks involved)

1. Security

Traffic cones will be used to alert drivers to the presence of the work area at the site 4660 Hessel Road, Sebastopol, California. Traffic control will be performed by a licensed Traffic Control Company (Flash Safety). In the event that impacted soil and resulting vapor create a health hazard, temporary fencing will be used to create an exclusion zone to limit personnel access and initiate personal protection equipment.

2. Equipment and Tasks

a. Anticipated equipment needs are as follows:

- | | |
|----------------------------------|---|
| • Pickup/Tool Truck | 1 |
| • Concrete breaker/saw | |
| • Drill Rig | 1 |
| • Vibratory Compaction Equipment | |
| • Rubber-Tire Loader | |
| • 20# Fire Extinguisher | 1 |
| • PID | 1 |

e. Traffic Control

Traffic flow is anticipated to be moderate to minimal based on part drilling programs at the site. Flow of vehicular traffic will be controlled by traffic control company (Flash Safety).

3. Soil Sampling and Analysis

A project scientist/geologist will be on-site during the investigation to collect soil and groundwater samples. The samples will be submitted to a State certified laboratory for the appropriate analysis.

IV. HAZARD EVALUATION

A. Summary of anticipated Hazards:

- ☒ Physical hazards inherent to the site.
- ☒ Physical hazards related to the operations- Working around heavy equipment is dangerous and requires attention to vehicle movement. All equipment shall be maintained in good working condition, including back-up alarms which are audible at a distance of 200 feet. When the backhoe is operating, all personnel will be at a safe distance from the machinery.
- ☒ Chemical hazards - Possible petroleum vapors. Monitor vapor and upgrade level of protection if necessary. All uncertified workers to vacate Site until respirators no longer required.
- ☐ Community hazards.
- ☐ Electrical hazards.
- ☒ Mechanical hazards.
- ☐ Natural hazards.
- ☐ Biohazards.
- ☐ Radiation hazards.
- ☐ Heat stress.
- ☐ Confined space entry - There is currently no confined space conditions anticipated.
- ☒ Noise hazards- Use earplugs around operating equipment.
- ☐ Cold stress.
- ☒ Other- Explosion and Fire hazards exist. NO SMOKING is allowed in the exclusion area

B. Chemical Hazards:

Chemical	Mode of Intake	Exposure Limits (TWA/OSHA ppm)	IDLH ppm
Benzene (Ca)	Dermal/Inhale	0.1/1.0	500
Ethylbenzene	Dermal/Inhale	100/100	800
Toluene	Dermal/Inhale	100/200	500
Xylenes	Dermal/Inhale	100/100	900

Key: Ca = NIOSH Carcinogen

Identify operations when the contaminants are of greatest concern on the site:

- During Excavation: Pockets of gas may be released
- During Sampling: Airborne dust could be generated

Comments:

Eliminate all potential ignition sources.
Minimize or eliminate (if possible) all contact with impacted soil.

References used:

 X NOISH/OSHA X ACGIH (TLV) X SAX
 Patty OHS Other

C. Physical Hazards

1. Physical Hazards Inherent to the Site:

 X Fire X Explosion Anoxia
 Heat X Cold Stress X Noise
 Radiation Biohazards X Other

2. Physical Hazards Related to the Operations

 Heat Stress Cold Stress Trenching
 Excavating Lifting Tanks X Heavy Equipment Operations

D. Community Hazards

1. Potential for contaminant migration:

Use caution for heavy wind conditions that may enhance dust transport. Soil should be kept moist which should inhibit dust. A source of H₂O for dust control will be available.

2. Potential for community exposure:

Area will be controlled by safety officer. No exposure is likely.

V. HAZARDOUS WASTE FIELD SAFETY DIRECTIVES

A. General Rules

1. Safety Plan will be available on-site at all times.
2. Emergency information will be posted.
3. No facial hair is allowed that will interfere with the respirator face seal.
4. All operations will have first aid kits and fire extinguishers available.
5. Site access will be restricted to authorized personnel only.

6. Hard hats and steel-toed boots will be worn at all times.
7. No contact lenses.
8. No eating or smoking on-site.
9. Substance abuse and alcohol are prohibited.

B. Mechanical Hazards

1. Stand at a safe distance from heavy equipment. Exercise extreme caution when operating heavy equipment must be approached.
2. Verify that all equipment is in good condition.
3. Do not stand or walk under elevated loads or ladders.
4. Appropriate guards must be used if equipment has potentially hazardous moving parts.

C. Electrical Hazards

1. Locate and mark buried utilities before drilling, digging, or excavating. Call USA 48 hours in advance of digging or drilling.
2. Maintain at least 10 foot clearance from overhead power lines.
3. Contact utility company for minimum clearance from high voltage power lines.
4. If unavoidably close to buried or overhead power lines, have power turned off, with circuit breaker locked and tagged.
5. Properly ground all electrical equipment.
6. Avoid standing in water when operating electrical equipment.
7. If equipment must be connected by splicing wires, make sure all connections are properly taped.
8. Be familiar with specific operating instructions for each piece of equipment.

D. Chemical Hazards

1. Conduct direct reading air monitoring on initial entry and periodically at both the work area and at the downwind area to evaluate respiratory and explosion hazards.
2. Use water to keep dust under control during all operations.

E. Heat Stress

When temperature exceeds 70 degrees F, take frequent breaks in shaded area. Unzip or remove coveralls during breaks. Have cool water or electrolyte replenishment solution available. Drink small amounts frequently to avoid dehydration. Count the pulse rate for 30 seconds as early as possible in the rest period. If the pulse rate exceeds 110 beats per minute at the beginning of the rest period, shorten the work cycle by one third.

F. Cold Stress

Wear multilayer cold weather outfits. The outer layer should be of wind resistant fabric. 0 degrees to 30 degrees F total work time is four (4) hours. Alternate one (1) hour out of the low temperature area. Below 30 degrees F, consult industrial hygienist. Drink warm fluid. Provide warm shelter for resting. Use buddy system. Avoid heavy sweating.

G. Noise Hazard

Use earplugs or earmuffs when noise level prevents conversation in normal voice at distance of three feet. Use hand signals.

H. Confined Space Entry

1. Confined spaces include trenches, pits, sumps, elevator shafts, tunnels, or any other area where circulation of fresh air is restricted or ability to readily escape from the area is restricted.
2. Consult HSO and Corporate Health and Safety Policy prior to entering confined space. If confined space entry is required a confined space entry checklist must be completed, and a permit must be obtained from the CHSO.
3. We do not anticipate confined space conditions during this investigation.

I. Biohazards

N/A

J. Natural Hazards

N/A

K. Traffic Hazards

Brightly colored safety vests with reflective tape will be worn by all worksite personnel if necessary.

L. Emergency Response

SCS Engineers is not an emergency response contractor. Evacuate the scene and notify

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emergency response personnel (Dial 911). Notify the project manager and on-site operations contacts as soon as possible.

VI. PLANNING/SITE SETUP

A. Site Setup

On-site communication method: Voice and hand signals

The following hand signals shall be used to communicate with others if not within talking distance:

Grip buddy's wrist or waist..... LEAVE AREA IMMEDIATELY
Both hands atop head..... NEED ASSISTANCE
Finger touching nose or respirator..... CAN SMELL CONTAMINATION
Thumbs up O.K., I'M ALL RIGHT, I UNDERSTAND
Thumbs down NO, NEGATIVE
Right hand up in tight fist STOP

Off-site communication method: Cellular telephone

Site security: Safety officer.

Identify the water and electrical locations: As shown on Site Map

B. Levels of Protection Available or Used

☐ A ☐ B ☐ C ☒ D

Modifications/Additions:

Full face respirators will be used in areas where monitoring indicate TLV levels greater than 50 ppm. Uncertified workers will vacate the site whenever TLV exceeds 50 ppm. Uncertified workers will not be allowed back on the Site until respirators are no longer necessary to continue the work.

C. Use of Buddy System

No work is to be done at any time during the course of the project without the benefit of the buddy system. Before work starts, employees are to select their buddy and remain in direct line of sight with that buddy throughout the workday. No one shall work alone at any time. If an odd number of personnel are present, one buddy group of three will be selected.

Partners should provide their partner with assistance, observe their partner for signs of chemical or heat exposure, and periodically check their partner's personal protective equipment for rips and contamination.

D. Levels of Protection Available or Used

☐ A ☐ B ☐ C ☒ D

E. Air Monitoring Guidelines

<u>Device</u>	<u>Action Level</u>	<u>Action to be Taken</u>
PID	50 ppm	Stop work. Place workers upwind and upgrade level of protection until exposures are below 50 ppm. Uncertified workers to evacuate the Site.

Comments: Periodically check downwind area

F. Measures to Control Off-site Migration and Exposure:
Control dust. No visible dust allowed, keep soil moist to limit vapors.

G. Special Site Considerations: Space limitations; traffic

VII. FIELD ACTIVITIES

A. Site Entry and Setup:

Initial level of protection: D

Modifications: None

Special Procedures, Precautions, Equipment: None

B. Soil Excavation or Drilling operations: (general)

Initial level of protection: D

Modifications: Respiratory protection available, uncertified individuals prepared to evacuate Site.

Special Procedures, Precautions, Equipment: NA

C. Decontamination: (to be completed prior to leaving site)

Personnel: Dust off as necessary.

Instrumentation: NA

Sampling Equipment: Clean tools and wash with alcohol, rinse with DI water.

Heavy Equipment: Remove soil from drilling auger.

General LOP for Decontamination: D

Comments:

Disposal of Investigation-derived materials: To be determined (tbd) based on analytical test data.

Solids: tbd

Liquids: tbd

D. Sample Handling and Precautions:

1. Personnel will wear gloves and other protective equipment as necessary during the handling of contaminated samples. Any analytical or geotechnical laboratory used for this project will be notified prior to shipment of the suspected contaminants at this site.
2. Sample containers will be decontaminated prior to shipping, wrapped in bubble wrap placed in zip-lock bags, and packaged in absorbent material. Shipping containers will be clearly labeled. Samples will be shipped under full chain-of-custody procedures.

E. PPE Selection

1. All PPE shall be selected based upon the performance characteristics of the equipment. For reference, Table 1 lists PPE specifications for EPA levels, B, C, and D. All respiratory equipment selection criteria shall meet the requirements of the Respiratory Protection Program.

a. Minimum Protection

At a minimum, workers wear a hard hat, safety glasses and steel-toed boots while working at the site.

b. Skin Protection

Anyone handling soils from contaminated areas will wear Nitrile or Neoprene gloves. Level C skin protection will be invoked when handling known contaminated soils.

c. Foot Protection

Steel-toed boots shall be worn at all times.

d. Respiratory Protection

If needed, workers shall don half-face respirators (equipped with organic vapor cartridges). These respirators will protect workers from atmospheres up to 1,000 ppm organic vapors and 0.05 mg/m³ dust. The soil will be screened in the field using an organic vapor analyzer to verify that adequate protection is being provided to workers. Respirators will be used in accordance with the Respiratory Protection Program as outlined in the Health and Safety Manual. Uncertified workers will vacate the Site as directed by the Site Safety Officer.

e. Hearing Protection

Earplugs shall be worn when working in and around open cab, heavy equipment, or working around drilling equipment.

f. PPE Use

All employees working on the site have been or shall be trained on the proper

selection and use of personal protective equipment. PPE is to be used at all times.

TABLE 1 - PPE SPECIFICATIONS

<u>Level of Protection</u>	<u>Equipment</u>	<u>Inspection Schedule (I) or Work Mission Duration (D)</u>
C	Half or full-face air-purifying respirator equipped with organic vapor cartridges.	I - Before each use. D - (black & purple cartridges) 1 work day or less (if signs of breakthrough occur).
	Polyethylene-coated or regular Tyvek disposable clothing (based on hazard).	D - One working span (~4 hours or until torn).
	Nitrile gloves.	I - Before each use.
	Steel-toed rubber boots or steel-toed safety shoes with rubber outer boots.	I - Before each use.
	Hardhat.	I - Before each use.
	Eye protection.	I - Before each use.
D	Steel-toed rubber boots or steel-toed safety shoes with rubber outer boots.	I - Before each use.
	Hardhat.	I - Before each use.
	Eye protection.	I - Before each use.
	Miscellaneous gear may be required depending on the hazard.	I or D - as needed.

g. Work Mission Duration

PPE shall be used for the work mission duration.

h. PPE inspection, Maintenance and Storage

All PPE shall be inspected and maintained to ensure the integrity of the equipment and to assure that it is in good working order at all times. The inspection schedule for PPE is outlined in Table 1. If equipment is not in proper working order, it shall not be used and the problem shall be brought to the attention of the Supervisor. All PPE shall be stored in a clean, dry place in accordance with manufacturer's suggestions.

i. PPE Training and Fitting

All personnel shall be properly trained and fitted with PPE prior to working at the site.

j. PPE In-Use Monitoring and Effectiveness Evaluation

The employees using PPE shall be continually monitored by the Site Safety Officer and the Supervisor to assure that the employees are properly selecting and wearing the equipment prescribed in this Plan and to ensure that the equipment prescribed is effectively performing as required.

G. Safety Meetings

1. Attendance at all safety meetings is mandatory for all personnel working at the site.

a. Pre-construction Safety Meeting

All personnel who are to be involved with the drilling proposed for the project are required to attend a pre-construction safety meeting in which the special hazards of the site will be discussed. The person responsible for conducting the pre-construction safety meeting shall keep a daily record of the meeting along with all information discussed. This daily record is to be completed on a Safety Meeting Summary form and shall be kept in a safety binder at the site for the duration of the project.

b. Daily Tailgate Safety Meetings

Each group of personnel doing work as an individual group (i.e., construction, subcontractors, sampling crew, etc.) is required to conduct daily tailgate safety meetings, prior to the start of work, covering the day's work to be performed, any safety related problems encountered the previous working day, and any new work procedure which will be employed or new hazards which may be encountered or introduced. The person responsible for conducting the tailgate safety meeting shall keep a daily record of the meeting along with all information which was discussed.

VIII. EQUIPMENT LISTS

Personal Protective Equipment

[(x)] required if level chosen

LEVEL C used X

APR used (x)
Full face
Half mask (x)
Cartridge Type: Black OVA
Escape air pack
Surgical gloves (x)
Outer work gloves (x)
Type: nitrile
Protective clothing —
Type: Tyvek
Hooded —
Rain suit —
Tyvek —
Safety glasses —
Hard hat w/face shield (x)
Neoprene safety boots (x)
Steel-toed boots (x)
Boot covers (x)
Hearing protection —

Instrumentation

OVA —
HNU —
OVM —
PID (x)
Oxygen/explosimeter (LEL) —
Dragger Kit —
Tubes used:

Low flow air pumps —
High flow air pumps —
Radiation Monitor-4 —
Radiation dosimeters —
Noise meter —
WBGT —
pH meter —
Magnetometer —
GPR —
EM —

First Aid Equipment/Supplies

First Aid Kit (x)
Oxygen —

LEVEL D used (x)

APR available (x)
Full face
Half mask
Cartridge Type: Black OVA
Escape air pack
Surgical gloves
Outer work gloves leather
Type:
Protective clothing
Type: Tyvek
Hooded
Safety Vest (x)
Safety glasses (x)
Hard hat (x)
Neoprene safety boots
Steel-toed boots (x)
Boot covers
Hearing Protection (x)

Decontamination Equipment

Plastic Sheeting (x)
Large Washtubs
Small Washtubs
Scrub Brushes
Pressurized Sprayers
Solvent Sprayer(s)
Plastic Trash Cans
Trash Bags (x)
Water Bottles (x)
Paper Towels (x)
Duct Tape (x)
Masking Tape
Zip Lock Bags
Detergent
TSP
Sodium Hypochlorite
Sodium Bicarbonate
Bleach
Hand Soap
Solvent Rinse
Acetone
Hexane
Methanol
Other: _____
Tables
Chairs

Eye wash	(x)
Stretcher	_____
Fire extinguisher	(x)
Thermometer(s)	_____
Blood Pressure Monitor	_____
Drinking water	(x)
_____	_____
_____	_____

Site Security

Traffic cones	(x)
Banner tape	_____
Flagging tape	(x)
Warning signs	_____
Waste drum labels	_____
Waste drum labels	_____
Security guard	_____
_____	_____
_____	_____

Sampler Rack	
Tool kit	(x)

Other Equipment

Camera	(x)
Film	(x)
Drum Dolly	
Trowels	
Pick	
Shovels	
Binoculars	
Megaphone	
Mobile telephone	(x)
Fencing	
Thieving rods	
Bung wrench (brass)	
Spill sorbing pads	(x)
Bailers	(x)
Rope	(x)

IX. EMERGENCY INFORMATION (Post Onsite)

ACUTE SYMPTOMS*

Dizziness, nausea, shaky
Unconsciousness

FIRST AID

Exit exclusion zone, rest, shade, fresh air.
Get medical help